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Department of Marine and Fisheries, Canada

METEOROLOGICAL SERVICE



MONTHLY WEATHER REVIEW

BY

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DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

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No. 1.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather in British Columbia during January was exceedingly cold, the mean temperature ranging from 6° below average near the coast to as much as 22° below in the Upper Mainland. Fine weather prevailed, and the precipitation which was chiefly snow, occurred at most places on or about the 2nd, 3rd, 4th, 17th to 22nd and last two or three days of the month. On the 31st the accumulated snow lay to a great depth over the Upper Mainland. Sleighing was possible in Vancouver throughout the month which is quite phenomenal.

In the Western Provinces the weather was almost phenomenally cold, the negative departure in the mean temperature being from 11° to 25° below the average and the minimum temperature between 40° and 50° below zero at many places. The proportion of bright sunshine exceeded the average and the snow which was recorded chiefly on or about the 1st, 2nd, 3rd, 4th, 7th to 10th, 18th, 20th, 23rd to 25th and 21st, accumulated to an unusual depth and was much drifted by high winds. It may safely be said that such severe weather has not been felt in many years.

The weather in Manitoba was not quite so cold as in the last named provinces, but the mean temperature was well below the average and the lowest actual readings were more than 40° below zero at many stations. Much dull weather with fresh winds was general during the first half of the month, and although strong winds were somewhat frequent during the second half, the weather was much brighter. The falls of snow, which varied with the district considerably, occurred chiefly on or about the 2nd, 3rd, 4th, 9th, 19th, 23rd and 31st, the quantity being below the average at some places and above at others.

In Ontario the weather was exceedingly mild during the first half of the month and unusually cold during the second half. Gales with much rain occurred on the 3rd, excepting near Lake Superior when there was light snow. On the 4th and 5th there was light snow over the Georgian Bay and Ottawa and Upper St. Lawrence Valleys. On the night of the 6th there were local showers and on the following day heavy rain in districts contiguous to the Lower Lakes and Lake Huron. On the 8th and 9th, gales occurred with snow flurries and on the 10th the gales continued with heavy snow, except in Lower Lake districts where there were only snow flurries. On the 12th there were moderate snowfalls accompanied by gales. On the 13th and 14th there were showers near Lakes Huron, Erie and Ontario and snow flurries elsewhere. On the 16th and 17th a heavy fall of snow occurred in Lower Lake districts and locally near Lake Superior, flurries being recorded elsewhere. On the 18th snow flurries were general. On the 19th rain occurred generally except in the Ottawa Valley where there was snow turning to rain and over the Lake Superior District where there was snow with gales. On the 20th, 21st and 22nd snow flurries were general except near Lake Huron where the snow was heavy. On the 24th and 25th heavy snowfalls were reported from the western portion of the province whilst elsewhere there were only flurries. On the 25th, 26th and 27th falls of snow occurred at most places, they being heaviest near the Georgian Bay. On the 28th there were snow flurries in districts contiguous to Georgian Bay, Lake Erie, Huron and Ontario. On the 29th and 31st there were light snowfalls or flurries in all districts. In most localities the proportion of bright sunshine departed little from the average, but in the extreme western portion of the province it was below the average. Elsewhere there was more sunshine and at most places the proportion was excessive.

The weather in the Province of Quebec was comparatively mild during the first eight or nine days after which it was exceeding cold to the end of the month, excepting on the 19th and 20th when it was quite mild. Cloud and sunshine followed in quick succession and falls or flurries of snow were frequent more especially from the 8th to 22nd, but they were mostly light and the total precipitation was below the average. High winds occurred quite frequently and the snow was much drifted. The depth of snow on the ground on the 31st was from 18 to 26 inches in western districts and 46 to 48 inches elsewhere.

In New Brunswick the weather was quite cold after the 8th, and the mean temperature was below the average. Much fine bright weather was recorded during the second half of the month and in most localities the precipitation was deficient. Heavy rain occurred at many places on the 1st, also smaller quantities on the three succeeding days, and snow was reported on or about the 9th, 11th, 14th, 20th, 23rd, 25th and 31st. Up to the 9th the ground was bare near the Bay of Fundy. On the 31st the depth throughout the greater portion of the Province was from four to eleven inches.

The weather in Nova Scotia was unusually cold and after the 9th temperatures below zero were recorded occasionally in the more northern portions. Sudden changes of temperature also characterized the weather of the month. The amount of precipitation varied considerably in the different districts, but the chief falls were recorded from the 1st to 5th, 9th to 14th, 19th to 27th and 30th, much of this being rain in southern districts. Strong winds were of frequent occurrence and the snow was much drifted.

In Prince Edward Island the weather was exceedingly mild during the first half of the month, but during the second half it was unusually cold, and the mean temperature of the month was below the average. From the 1st to 15th the weather was mostly cloudy, but after the latter date bright sunshine was frequent. Precipitation was recorded on or about the 1st, 2nd, 5th, 9th, 12th, 15th, 18th, 19th, 23rd and 27th, much of which during the early part of the month was rain. On the 31st there was enough snow for good sleighing.—F. F. PAYNE.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for January was subnormal throughout Canada except over British Columbia, where with local exceptions on the Lower Mainland, the normal value was not reached. Extremes of departure from average were $+0.18$ of an inch at Port Arthur, Ont., and -0.15 of an inch at Kamloops, B.C.

HIGH AREAS.

Twelve very pronounced anti-cyclonic formations were traced across the Continent during January.

With the exception of one system which traversed the Southern portion of the Continent during the first week of the month, all high pressure areas entered the field of observation over the Yukon Territory and passed southeastward to the Atlantic.

Severe cold waves accompanied many of the systems and were, as a rule, most pronounced when over the Prairie Provinces.

LOW AREAS.

During the month thirteen areas of low pressure were charted, all with one exception appearing either in the western or northwestern portion of the Continent, invariably first drifting on to the Continent from the Pacific Ocean. No less than ten of the areas passed across the Lake Region. The areas were not as a rule very energetic: the disturbance which developed on the 9th in the St. Lawrence Valley and the system which traversed the Continent between the 18th and the 21st, and which were both attended by exceptionally heavy gales, were the most pronounced of the series. There was a marked absence of low areas passing up the United States Atlantic seaboard.

WINDS.

In British Columbia, on Vancouver Island, and over the mainland, the direction was chiefly between the north and east, with nine days with strong and fourteen with fresh breezes and three gales.

In Alberta and Saskatchewan the westerly direction predominated with eight days with strong and eleven with fresh breezes and three gales.

In Manitoba the westerly direction was the most general with six days with strong and thirteen with fresh breezes and three gales.

In the Lake Region the direction was variable with ten days with strong and ten with fresh breezes and five gales.

In the Ottawa and Upper St. Lawrence Valleys the direction was variable, favouring somewhat the north and west with four days with strong and thirteen with fresh breezes and five gales.

In the Lower St. Lawrence Valley and the Gulf the north and west directions chiefly prevailed, with eight days with strong and six with fresh breezes and seven gales.

In the Maritime Provinces the north and west directions usually obtained with ten days with strong and seven with fresh breezes and eight gales; four of the gales were, however, of a local character, and none of the remaining four were noticeable for any exceptional violence. The heaviest gales occurred between the 11th and 12th and between the 20th and the 21st. Five storm warnings were issued during the month to those stations remaining open to winter navigation.

TEMPERATURE.

The temperature was below the average in all portions of the Dominion except in the Peninsula of Ontario where it was from average to 3 degrees above. The negative departures in British Columbia, Alberta and Saskatchewan, ranging as they did from 6 to 22 degrees, were phenomenal, and in these Provinces it was the coldest January of which the Meteorological Service has any record. In Manitoba the negative departures were also pronounced, but the mean temperature was not as low in that Province as recorded in some previous months of January. Over the greater portion of Ontario and throughout Quebec and the Maritime Provinces the negative departures ranged from 1 to 5 degrees.

The Highest and Lowest temperatures in each Province during January, 1907, were:

British Columbia,	52° ·0 on 22nd at Isonhalem,	—51° ·0 on 15th at Golden.
Alberta,	48° ·0 on 22nd at Pekiska,	—56° ·0 on 14th at Knee Hill and Three-hills Creek.
Saskatchewan	30° ·0 on 9th at Onion Lake.	—51° ·4 on 16th at Lloydminster.
Manitoba,	32° ·0 on 2nd at Carberry,	—50° ·0 on 15th at Carberry.
Ontario,	58° ·7 on 19th at Birnam,	—57° ·5 on 23rd at White River.
Quebec,	49° ·1 on 20th at Sherbrooke,	—45° ·0 on 24th at Abitibi.
New Brunswick,	53° ·0 on 20th at Moncton,	—30° ·0 on 25th at St. Stephen.
Nova Scotia,	56° ·0 on 21st at Wolfville,	—18° ·3 on 18th at Truro.
Prince Edward Island.	48° ·0 on 21st at Summerside.	—13° ·0 on 16th at Summerside.

PRECIPITATION.

The precipitation was generally below the average in British Columbia, but a few isolated districts, principally in the Okanagan Valley, recorded an excess. In the Western Provinces the precipitation was all snow, which in some localities was a few inches more than the usual quantity and in others a few inches less. In Ontario the precipitation was above the average amount in the Lake Superior Region, and in the Peninsula of Ontario, and much below again in the eastern portion of the Province. In Quebec it was slightly in excess of the average in the eastern portion and deficient elsewhere. In the Maritime Provinces it was everywhere below the average except in one or two isolated localities where it was slightly above.

DEPTH OF SNOW.

At the close of the month the whole Dominion was snow covered, the depth on the ground differing materially with the district. In British Columbia the amount in most localities was considerable, even many coast stations reporting continuous sleighing throughout the month, which is most unusual. In the Western Provinces, owing to the long-continued cold weather, the snow which covered the ground at the close of 1906, with the addition of that which fell in January, amounted to a depth of from 10 to over 30 inches, a marked contrast to the conditions prevailing in January last year when in some localities the ground was bare of snow, and in others it was but slightly covered. In Ontario, in the Lake Superior district and in far northern localities the snow on the ground varied from 18 to 24 inches, elsewhere from 3 to 10 inches. In Quebec it varied from 18 to 26 inches in the western portion, to 46 and 48 inches in the eastern portion. In the Maritime Provinces it was from 4 to 14 inches, and very locally 18 inches.

THICKNESS OF ICE.

Edmonton, 30 inches; Battleford, 30 inches; Medicine Hat, 30 inches; Swift Current, 30 inches; Port Arthur, 14 inches; Port Stanley, 8 inches; Kingston, 14 inches; Rockliffe, 30 inches; Ottawa, 30 inches; Toronto, 10 inches; Georgetown, 15 inches; Arden, 19 inches; Port Dover, 12 inches; Meaford, 10 inches; Gravenhurst, 25 inches; Brome, 26 inches; Charlottetown, 12 inches; Fredericton, 24 inches; Yarmouth, 11 inches.

BRIGHT SUNSHINE.

The amount of bright sunshine recorded during January was subnormal along the shores of Lake Ontario and in the Ottawa and St. Lawrence Valleys; elsewhere in Canada a supernormal value was registered.

Extremes of departure from average were +26% at Battleford, Sask., and —10% at Montreal, Que., and the possible daily amount of sunshine was recorded at Battleford on the 6th.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JANUARY, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	PRESSURE.				TEMPERATURE.				DIRECTION OF WIND FROM.				VELOCITY OF WIND.				PRECIPITATION.															
			Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed in.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dew point.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest velocity.	Date and direction from.	Amount.	Difference from average.	Month.	Day when observed.
NOVA SCOTIA.																																		
Halifax.	44 39	63 36	88.30	15.30	67.20	26.10	21.31	1.63	33.30	3	1	10.0	17.18	1	7	200	9	28	27	41	38	185	45	61	714	12.6	25.3	16.8W	0.18	0.20	10	18		
Sydney.	46 10	49 10	33.35	30.11	30.65	29.33	1.27	29.9	0.53	31.3	20	3.1	31.21	3	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Antigonish.	45 22	63 18	70.30	16.30	61.20	23.10	17.5	17.5	1.82	31.8	1	18.3	18.21	7	22	7	11	141	106	68	72	53	21	251	7	11	21	0.20	3.30	1	23	0.75	11	
Yarmouth.	43 40	65 2	65.30	17.30	57.30	21.00	23.1	3.52	30.0	20	1.0	17.17	1	8	11	141	106	68	72	53	21	251	7	11	21	0.20	3.30	1	23	0.75	11			
Pictou.	45 12	62 41	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Port Hastings.	44 39	61 22	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Whitehead.	43 38	59 06	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Sable Island, E. Point.	43 37	60 06	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Sable Island, W. Point.	43 23	61 19	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Wolfville.	43 7	61 21	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Bridgeport.	43 49	65 16	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
Windsor.	44 39	61 6	44	13	30	11	21	0	8.16	19.0	20	0.0	10.10	1	15	26	16	19	27	35	80	319	110	714	5.1	16.0	16.8W	3.8	0.10	10	11			
P. E. ISLAND.																																		
Charlottetown.	46 14	63 10	38.30	13.30	62.20	12.10	15.1	1.82	31.8	20	11.0	17.15	1	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15	
Hamilton.	46 25	63 18	11.1	9.18	0	21	11.1	9.18	0	21	11.1	17.15	1	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15	
Summerside.	46 18	63 31	11.1	9.18	0	21	11.1	9.18	0	21	11.1	17.15	1	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15	
NEWFOUNDLAND.																																		
St. John's.	47 31	52 12	125	29.50	54.20	21.30	23.2	0.23	35.47	0	2	0.0	18.15	6	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15
Channel.	47 35	50 44	125	29.50	54.20	21.30	23.2	0.23	35.47	0	2	0.0	18.15	6	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15
Cape Norman.	47 38	53 22	125	29.50	54.20	21.30	23.2	0.23	35.47	0	2	0.0	18.15	6	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15
Amour Point.	47 38	54 11	125	29.50	54.20	21.30	23.2	0.23	35.47	0	2	0.0	18.15	6	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15
Point Rich.	47 42	57 25	125	29.50	54.20	21.30	23.2	0.23	35.47	0	2	0.0	18.15	6	8	13	21	3	28	27	41	38	185	45	61	714	5.9	22.3	20.8	3.33	0.15	0.87	10	15
BERMUDA.																																		
Prospect.	32 17	61 30	1.01	30.26	30.10	30.12	0.38	61.0	2.31	62.0	28	54.6	25.9	1	6	0	7	5	11	6	1	8	9	8	7	62	23.0	29.8	1	148	0.67	0.31	11	18

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING JANUARY, 1907.

STATION.	RAINFALL					SNOWFALL				REMARKS
	Amount in inches	No. of Days, '01, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Cochitlam	8.35	5	20	3.61	20-21	16.2	7	9.0	17-8	
Denman Island	3.80									
Goldstream Lake	3.86	9	15	1.05	20	33.0	8	10.0	19	
Hartley Bay	1.25	2	22	1.20	22	53.0	7	20.0	19-20	
Naas Harbour			27			44.0	5	24.0	20	
Nanaimo	1.85	5	23	1.15	19-20	16.0	4	10.0	2	
Royal Oak	1.08	4	25	1.23	19	2.0	2	1.0	1	
Somas River	3.39	3	18	2.80	20	25.0	10	7.0	3	
ALBERTA—										
Bismark			23			17.5	8	5.0	21	
Bardo			27			4.0	4	2.0	21	
Beaver Hills, W.			25			6.5	6	3.0	20-21	
Bruderheim			30			6.0	1	6.0	21	
Dorence			24			20.0	7	7.0	10	
Conjuring Creek			26			12.3	5	6.2	20-21	11 and 29 Mercury frozen.
Confts			18			26.0	13	6.0	11-12	11th—12 0
Grassy Lake			24			13.0	7	4.0	10	15th—15 0
Heather Brae			23			13.8	8	7.2	20-21	14th 56 0, 15th 51
Innisfail			5			10.0	5	7.0	10	
Islay			4			3.4	1	2.5	9	
Josephburg			6			12.5	6	4.0	25	
Jumping Pound			5			5.8	5	4.0	11	
Lacombe			19			12.0	12	4.0	11	
Macleod			4			4.0	4	1.5	28	
Magrath			7			23.0	7	6.0	12	
Mayton			27			13.0	1	8.0	10-11	
Ponoka			26			10.0	5	6.0	20-21	
Stirling			27			11.0	1	6.0	3-4	
Saddle Lake			30			1.0	1	1.0	21	
Sion			29			5.0	2	4.0	21	
Wabamun			21			13.1	10	5.0	20	
Clover Bar						6.0	1	6.0	16	
Vermilion							2			
Morienville						2.0	2	1.5	3	
SASKATCHEWAN—										
Elm How			5			12.0	5	5.0	1	
Inisinger			28			4.5	3	3.0	31	
Last Mountain			28			12.0	3			Very strong winds.
Regina			23			12.2	8	4.0	23-24	
MANITOBA—										
Cartwright			25			8.0	6	3.0	1	22nd—32—blizzard.
Grelua			26			13.5	4	6.0	2	
Norquay			24			14.5	7	4.0	2	
Rapid City			19			6.5	12	2.5	2	13th—49
ONTARIO—										
Aurora	1.73	5	15	0.80	3	9.5	10	2.8	12	
Georgetown	2.23	6	8	0.84	3	13.0	18	4.0	12	
Strathroy	3.54	7	16	0.90	7	18.0	8	4.0	23	
Wyoming	3.05	4	22	1.10	7	13.0	5	5.0	22	Fog, 6, 7, 14, 18, 19, 31,
Arden	2.13	6	19	0.85	20	11.0	6	4.0	11	Thunder, 7, 8, 21th, Crows,
Goderich	2.49	3	22	1.00	19	9.0	6	2.0	12	Thunder, 7, 8.
Parma	2.35	4	25	1.00	4	5.0	2	3.0	26	
Sydenham	1.75	3	25	1.25	25	15.0	3	6.0	13	
Montague	0.61	2	25	0.51	19	9.0	5	4.0	31	
Lausdowne	1.40	3	27	0.77	4	2.0	1	2.0	10	
MacCue	0.75	2	23	0.75	19-20	10.0	6	4.0	12	
Princeton	2.95	6	18	1.15	3-4	10.5	6	3.0	13	
Ennismore	1.50	1	28	1.50	19	5.0	2	3.0	25	Fog, 3, 7.
Westport	1.88	4	21	0.86	3	7.8	6	2.5	12	
Huntsville	1.11	2	21	0.79	19	15.0	8	7.0	10	23rd—20
Wooler	1.57	4	22	0.81	3	4.5	6	2.0	12	
Croydon	1.80	2	26	1.20	19	10.0	3	4.0	12	
Einsdale	1.08	3	17	0.89	19	13.3	11	5.5	11	
Orangeville	4.42	6	18	1.50	3	9.5	7	5.1	12	
Westminster	2.48	5	22	1.33	8	3.0	5	3.0	31	
Midland			19			23.8	12	6.0	24	
Deer Park	2.11	4	20	1.06	3	14.2	6	4.8	16	
Warton	0.68	2	19	0.45	19	22.0	10	6.0	25	
Dutton	3.58	4	21	1.33	3	7.0	3	3.0	23	
Watford	3.13	4	27	0.95						No snow recorded.
NEW BRUNSWICK—										
Point Escomiac	0.16	3	21	0.11	2	15.0	7	5.0	24	

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF JANUARY, 1907.

	HOURS ENDING															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria				0.01	0.20	0.36	0.47	0.53	0.53	0.47	0.40	0.18	0.00			
Nanaimo				0.02	0.04	0.25	0.38	0.43	0.43	0.45	0.44	0.21	0.00			
Agassiz				0.00	0.00	0.34	0.52	0.54	0.52	0.44	0.30	0.16	0.00			
Kamloops				0.00	0.01	0.43	0.27	0.43	0.53	0.53	0.31	0.07	0.00			
Battleford				0.15	0.57	0.69	0.70	0.83	0.73	0.71	0.67	0.26	0.00			
Calgary																
Medicine Hat				0.03	0.20	0.44	0.54	0.55	0.53	0.51	0.30	0.07	0.00			
Edmonton				0.00	0.11	0.42	0.57	0.56	0.49	0.42	0.40	0.18	0.00			
Indian Head				0.00	0.00	0.41	0.58	0.63	0.54	0.55	0.40	0.07	0.00			
Brandon				0.00	0.15	0.37	0.55	0.66	0.61	0.58	0.58	0.44	0.02			
Winnipeg				0.04	0.31	0.51	0.54	0.46	0.46	0.46	0.17	0.25	0.00			
Woodstock				0.03	0.13	0.22	0.26	0.26	0.23	0.32	0.28	0.18	0.00			
Toronto				0.00	0.15	0.24	0.29	0.29	0.27	0.26	0.34	0.33	0.13			
Lindsay				0.06	0.11	0.18	0.30	0.29	0.26	0.29	0.39	0.26	0.20			
Barrie				0.02	0.12	0.22	0.27	0.26	0.24	0.28	0.27	0.19	0.00			
Gravenhurst				0.00	0.18	0.24	0.30	0.32	0.34	0.37	0.37	0.28	0.15			
Halleybury				0.03	0.25	0.40	0.39	0.41	0.46	0.43	0.37	0.23	0.00			
Kingston				0.05	0.11	0.14	0.19	0.33	0.35	0.32	0.30	0.13	0.02			
Ottawa				0.03	0.16	0.24	0.25	0.27	0.30	0.33	0.36	0.20	0.01			
Montreal				0.00	0.15	0.14	0.26	0.26	0.30	0.33	0.31	0.18	0.00			
Sherbrooke				0.03	0.23	0.28	0.25	0.28	0.31	0.26	0.20	0.13	0.01			
Quebec				0.00	0.15	0.26	0.32	0.35	0.36	0.41	0.42	0.28	0.01			
Fredericton				0.04	0.37	0.40	0.48	0.48	0.52	0.50	0.47	0.36	0.06			
Charlottetown				0.4	0.17	0.21	0.31	0.42	0.41	0.44	0.46	0.36	0.16			

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Battleford.	Medicine Hat.	Edmonton.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Halleybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month (Constant sunshine being 1)	0.36	0.30	0.33	0.27	0.45	0.39	0.38	0.37	0.46	0.41	0.24	0.24	0.31	0.20	—	0.33	0.20	0.23	0.24	0.22	0.28	0.41	0.33
Difference from average.	— .16	— .14	— .11	— .26	— .05	— .06	— .08	— .08	— .06	— .01	— .01	— .02	— .03	— .01	—	—	— .05	— .06	— .10	—	—	— .01	—
Maximum daily amount	0.88	0.83	0.72	0.78	1.00	0.80	0.81	0.69	0.86	0.90	0.88	0.99	0.97	0.85	—	0.87	0.76	0.86	0.80	0.89	0.87	0.93	0.96
Date.	25	13	22	12	6	27	26	12	31	25	5	23	23	23	—	22	7	31	26	23	16	21	25
No. of days clouded	9	15	13	6	1	10	8	6	7	8	18	15	16	11	—	10	17	15	11	15	9	9	10

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Atlin, IV.
4. Aweme, III ; Insinger, II.
5. Quebec, III : Aweme, III ; Chaplin, Foxleigh, Estevan.
6. Edmonton, III ; Foxleigh, Insinger, II.
7. Quebec, IV ; Truro, IV ; Haileybury, II.
8. Truro, IV ; Aweme, IV ; Bruce Mines, IV : Insinger, II.
10. Aweme, III ; Insinger, II.
11. Quebec, IV ; Treherne.
12. Qu'Appelle, IV ; Insinger, IV.
13. Haileybury, IV.
14. Treherne, Aweme, II : Chaplin, IV.
15. Edmonton, II ; Insinger, III.
16. Insinger, IV.
17. Treherne.
20. Kenora, II : Bruce Mines, IV.
21. Bruce.
22. Haileybury, III.
24. Edmonton, IV.

Thunder recorded on :

1. Halifax.
7. London, Strathroy, Wyoming, Westminster.
8. Port Stanley, London, Port Dover, Paris, Strathroy, Wyoming.
13. Quesnel.
15. Almasippi.
19. Renfrew, Barrie, Cottam.
20. Saugeen, Renfrew, Port Dover.
27. Bermuda.
30. Bermuda.
31. Bermuda.

FORECASTS FOR JANUARY, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1262. These were divided as follows :—

District.	No. Issued.	Verified.			Per- centage.
		No. Fully	No. Partly	No. Not	
Alberta	87	96	11	7	83.9
Saskatchewan	84	95	10	8	84.5
Manitoba	92	72	13	7	85.3
Lake Superior	103	77	20	6	84.5
Lower Lake Region	104	74	22	8	81.7
Georgian Bay	105	78	19	8	83.3
Ottawa Valley.	110	73	31	6	80.4
Upper St. Lawrence	110	75	28	7	80.9
Lower St. Lawrence	100	78	20	11	80.7
Gulf	114	83	21	10	82.0
Maritime Provinces, West	122	82	32	8	80.3
Maritime Provinces, East.	122	92	25	5	85.6
Total	1262	916	255	91	82.7

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART, -
Director.

Meteorological Office, Toronto,)
26th February, 1907.)

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

FEBRUARY, 1907.

No. 2.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather in British Columbia was exceedingly cold during the first six days, the temperature at night falling well below zero over the upper mainland. After the 6th it was much milder, but excepting in some districts on the lower mainland and islands the mean temperature was somewhat below the average. In most localities the precipitation was heavy, much of which over the mainland was snow and the depth on the ground was considerably more than usual at the end of the month. The chief precipitation occurred on the lower mainland and islands about the 5th to 8th, 12th and 18th to 28th. Over the upper land the dates were the 1st, 4th to 7th, 13th, 18th and 23rd to 25th. In Vancouver Island there was much dull weather but elsewhere bright sunshine exceeded the average.

The weather in the Western Provinces was exceedingly cold during the first five or six days after which it was quite mild up to the 19th. Comparatively low temperatures prevailed on the 20th and 21st, also from the 25th to 28th. From the 3rd to 18th there was much fine weather and in Saskatchewan the proportion of bright sunshine exceeded the average. The precipitation which was quite light occurred chiefly on or about the 1st and 25th, but at some places it was completely absent. By the end of the month the ground was bare in southern Alberta and elsewhere there was only a light covering.

In Manitoba the weather was cold during the first week, also from the 20th to 22nd and 25th to 28th the intervening periods being unusually mild. The precipitation which included rain at some places on the 22nd was quite light, falls occurring at most places on or about the 2nd, 11th and 22nd to 26th. Fine weather prevailed and the proportion of bright sunshine exceeded the average. The snow on the ground on the last day of the month was quite light.

In Ontario the weather was colder than usual, temperatures below zero occurring frequently throughout the month. On or about the 2nd, and from the 9th to 20th, the temperature occasionally rose above 32° at many places, but the nights were cold during this period. From the 3rd to 18th there was much fine weather and the proportion of bright sunshine for the month exceeded the average. The precipitation which was quite light and which included some rain occurred chiefly on or about the 2nd, 6th and 7th, 9th to 12th, 14th, 16th and 19th to 26th. Northeasterly winds were frequent and on the 2nd there was a heavy northwesterly gale. The depth of snow on the ground on the 28th diminished from about 24 inches in northern districts to about 6 inches in the southern portion of the province.

In the Province of Quebec the weather was unusually cold and stormy, temperatures well below zero occurring frequently throughout the month and the mean temperature being below the average. From the 1st to 6th, 10th to 21st and 24th to 27th light falls of snow occurred almost daily in western districts. In the eastern portion of the province the falls were much less frequent and the total precipitation of the month was everywhere comparatively light. On the 28th the depth of snow on the ground ranged from 30 to 60 inches.

The weather in New Brunswick was exceedingly cold and stormy and temperatures below zero at many places were of almost daily occurrence. From the 17th, however, it was comparatively mild, the temperature during the day rising between 30° and 40° in many districts: and on or about the 3rd and 21st similar temperatures were recorded. The precipitation which was mostly heavy in districts

contiguous to the Bay of Fundy and comparatively light elsewhere, occurred chiefly on or about the 2nd, 3rd, 5th, 8th to 11th and frequently from the 10th to 26th, nevertheless there were some fine days and the proportion of bright sunshine did not depart much from the average. The depth of snow at the end of the month was from 30 to 60 inches in most districts.

In Nova Scotia the weather was unusually stormy and cold, and in northern districts temperatures below zero were frequently recorded at many places on or about the 1st, 8th to 13th and 23rd to 28th. On the 11th, 12th and from the 14th to 18th, also on the 21st and 22nd, comparatively mild weather prevailed and temperatures exceeding 10° were noted at some places upon several occasions. Throughout the month there was much dull weather and precipitation was frequent from the 1st to 3rd also on or about the 6th, 15th, 18th to 22nd and 26th.

The weather in Prince Edward Island like that in the neighbouring provinces was exceedingly cold but a temperature slightly below zero was recorded on the 3rd at one station. Cloud and sunshine followed in quick succession and from the 7th to 10th and 22nd to 24th, it was fine almost continuously. Precipitation which included rain on the 3rd and 21st was recorded in most districts on or about the 1st, 2nd, 3rd, 6th, 7th, 14th to 21st and 26th. —E. F. PAYNE.

WINDS.

In British Columbia on Vancouver Island and over the Mainland the wind was mostly variable but favoured somewhat an easterly direction. Strong breezes occurred on four days, fresh on fourteen and there were two gales.

In Alberta and Saskatchewan the south and west directions predominated with twelve days with strong and eleven with fresh breezes and two gales.

In Manitoba the direction was variable favouring slightly the westerly with eight days with strong and nine with fresh breezes and four gales.

In the Lake Region the north and west directions were the most general with six days with strong and seven with fresh breezes and six gales.

In the Ottawa and Upper St. Lawrence Valleys the north and west directions were most in evidence with seven days with strong and seven with fresh breezes and five gales.

In the Lower St. Lawrence Valley and the Gulf the direction was mainly northerly to westerly with nine days with strong and nine with fresh breezes and four gales.

In the Maritime Provinces the direction was chiefly between the north and west with nine days with strong and seven with fresh breezes and seven gales.

In the Maritime Provinces where in many localities winter navigation is pursued, the gales occurred between the 2nd and 3rd, on the 5th between the 10th and 11th, on the 14th between the 18th and 19th, on the 21st between the 25th and 26th.

The gales were all warned but on several occasions the warnings were received late, some owing to delay in transmission and others again owing to delay in issue.

ATMOSPHERIC PRESSURE.

Subnormal values of the mean atmospheric pressure for February occurred throughout the Prairie Provinces, elsewhere in Canada they were in excess of the average.

The extremes of departure from normal were -0.10 of an inch at New Westminster, B. C., and -0.07 of an inch at Calgary, Medicine Hat, Alta., and Battleford, Sask.

HIGH AREAS.

During February the systems of high barometric pressure which traversed the Continent were as in January, of great intensity, the most important ones moving into the field of observation over the Yukon Territory, and thence passing southeastward to the Atlantic.

Eight systems of high pressure were charted, and in addition there were a few minor areas which were local to the Pacific slope.

Severe cold accompanied many of the systems during their passage over Canada.

LOW AREAS.

Fourteen areas of low pressure were sufficiently defined to admit of their paths being accurately traced. Five were first observed in the Yukon Territory and passed southeastward into the Lake Region; two travelled over the continent from the British Columbia coast; two first appeared on the United States Pacific coast; two in the Gulf of Mexico; two near the Bahama Islands and one apparently originated a little to the southward of the Lower Lake Region. Many of the areas were energetic and high winds and gales were more or less numerous in most portions of the Dominion, especially from the Lake Region to the Maritime Provinces.

TEMPERATURE.

West of Lake Superior the mean temperature of the month was above the average while east of it the mean was below the average. The largest positive departures, amounting to 7°, occurred in Saskatchewan, and the largest negative departures, also about 7°, occurred in Western Quebec and Southern New Brunswick. In the Western Provinces the extremes of temperature were pronounced, five days of extreme cold being followed by a fortnight of unseasonably mild weather which was in turn followed by moderately cold weather. From Ontario eastward the temperature was almost continuously below average.

The Highest and Lowest temperatures in each Province during February, 1907, were :

British Columbia,	65° ·1 on 15th at Alberni,	—43° ·0 on 21th at Atlin.
Alberta,	63° ·0 on 16th at Lethbridge,	—58° ·6 on 2nd at Alix.
Saskatchewan,	49° ·0 on 16th at Prince Albert,	—54° ·0 on 4th at Moose Jaw.
Manitoba,	55° ·0 on 15th at Fort Osborne,	—46° ·0 on 5th at Brandon.
Ontario,	48° ·0 on 14th at Bloomfield,	—54° ·0 on 4th at White River.
Quebec,	40 ·3 on 14th at Sherbrooke,	—39° ·0 on 23rd at Abitibi.
New Brunswick,	46° ·2 on 15th at Grand Manan,	—33° ·0 on 24th at St. Stephen.
Nova Scotia,	52° ·0 on 21st at Port Hastings	—22° ·3 on 13th at Truro.
Prince Edward Island,	45° ·0 on 22nd at Hamilton,	—12° ·0 on 23rd at Summerside.

PRECIPITATION.

In British Columbia the precipitation was above average in most localities, and was chiefly in the form of rain which at the lower levels soon cleared away the snow which lay on the ground early in the month. In the Western Provinces there was no rain and the snowfall was quite light. In Ontario there were many light snowfalls, and in the southwestern part of the Province a few showers, while in Quebec there were many snowfalls, some of which were heavy. In the Maritime Provinces the total precipitation was very generally in excess of the average with some rain, but it was for the most part snow which in a few instances was heavy.

DEPTH OF SNOW.

At the close of the month southwestern Alberta and the lower levels of Southern British Columbia were bare of snow while all other districts were covered.

In Quebec and New Brunswick the depth was considerable, ranging from 30 to 60 inches, but in Ontario and the Western Provinces a covering of less than 24 inches in northern districts lessened to a depth of a few inches in the more southern portions.

THICKNESS OF ICE.

Edmonton, 30 inches ; Medicine Hat, 15 inches ; Swift Current, 36 inches ; Battleford, 30 inches ; Minnedosa, 24 inches ; Port Arthur, 22 inches ; White River, 16½ inches ; Saugeen, 14 inches ; Port Stanley, 18 inches ; Rockliffe, 25 inches ; Ottawa, 30 inches ; Chatham, 23½ inches ; Charlottetown, 15 inches ; Sydney, 24 inches ; Toronto, 18 inches ; Lakefield, 20 inches ; Peterboro, 27 inches ; Owen Sound, 15 inches ; Lausdowne, 12 inches ; Sutton West, 24 inches ; Port Dover, 14 inches ; Clinton, 10 inches ; Gravenhurst, 24 inches ; Meaford, 18 inches ; Hamilton, 17 inches ; Arden, 29 inches ; Port Burwell, 18 inches ; Fredericton, 27 inches.

BRIGHT SUNSHINE.

From Southern Saskatchewan to and including Ontario, the amount of Bright Sunshine recorded during February exceeded the normal ; elsewhere in Canada, with local exceptions in British Columbia, the average was not reached. The extremes of departure from normal were +18% at Winnipeg, Man. and -5% at Montreal, Que. The possible amount of sunshine was recorded at Gravenhurst, Ont. on the 22nd, 24th and 25th ; and at Montreal, Que. on the 22nd and 23rd.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1967

or barometer not reduced to sea level.

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1907.

[illegible]

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, FEBRUARY, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.			TEMPERATURE.						DIRECTION OF WIND FROM										VELOCITY OF WIND.				PRECIPITATION.				No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of day.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest day velocity.						Date and direction from.	Amount.	Daily average.	Highest fall in month.	Days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.	No. of days with 1/10 inch or more.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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Halifax.	44 30	63 36	88	29.17	30.69	29.37	1.32	19.0	1.8 33	15.6	24.17 8	7.8	21	7.8	24.17 8	139	32	61	18	61	49	117	100	43	672	12.1	20.5	25.8	W	1.19	0.12	1.16	11	11	0 0 2																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Sydney.	46 10	60 10	35	29.98	30.57	29.21	1.36	16.6	3.3 31	17.5	23.21 1	11.1	21	11.1	23.21 1	44	33	25	22	10	120	56	132	111	672	4.9	15.7	27.8	W	3.7	0.29	1.03	15	12	1 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Truro.	45 22	63 18	136	29.90	30.58	29.26	1.32	15.6	4.0 33	50.1	22.3	13.24 9	21	22.3	13.24 9	7	11	33	5	4	15	9	13	81	12.0	15.7	27.8	W	3.0	0.29	1.03	11	16	3 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Yarmouth.	43 50	66 11	45	29.90	30.73	29.30	1.37	21.1	4.6 27	13.7	21.15 3	1.0	21	1.0	21.15 3	159	63	88	37	83	30	16	137	0	672	12.0	20.7	27.8	W	1.26	0.29	1.10	16	16	0 0 3																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Pictou.	45 12	62 11	45	29.90	30.73	29.30	1.37	20.9	4.0 16	12.0	21.15 3	0.0	8	13.9	21.15 3	18	8	5	7	1	15	11	14	2	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Port Hastings.	45 13	61 22	20	29.90	30.73	29.30	1.37	18.6	4.6 21	13.0	21.15 3	0.0	21	15.8	21.15 3	6	3	9	7	1	14	8	7	1	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Whitehead.	43 38	59 16	25	29.90	30.73	29.30	1.37	28.3	3.9 26	13.5	21.15 3	0.0	21	15.8	21.15 3	6	3	9	7	1	14	8	7	1	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Sable Island, E. Point.	43 57	60 16	25	29.90	30.73	29.30	1.37	16.9	3.2 11	17.0	21.15 3	11.0	12	21.6	21.15 3	18	8	5	7	1	14	8	7	1	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Parishboro.	45 23	61 19	40	29.90	30.73	29.30	1.37	16.9	3.2 11	17.0	21.15 3	11.0	12	21.6	21.15 3	18	8	5	7	1	14	8	7	1	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Wolfeville.	45 7	61 20	28	29.90	30.73	29.30	1.37	16.9	3.2 11	17.0	21.15 3	11.0	12	21.6	21.15 3	18	8	5	7	1	14	8	7	1	84	12.1	20.7	27.8	W	2.41	0.10	1.20	8	20	0 0 0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Bedford.	43 49	65 16	20	29.90	30.73	29.30	1.37	17.4	4.0 16	13.0	21.15 3	9.0	21	18.9	21.15 3	17	4	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING FEBRUARY, 1907.

STATION.	RAINFALL					SNOWFALL				REMARKS
	Amount in inches	No. of Days, '01, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—										
Coquitlam.....	10.05	12	16	2.35	6	17th Fog. Fog 9, 10, 11, 13, 19, 26.
Denman Island.....	5.31	7	20	1.45	23	8.0	1	8.0	1	
Goldstream Lake.....	6.54	15	10	2.08	7	7.0	3	3.0	1	
Hartley Bay.....	7.29	12	13	2.80	8	17.0	3	7.0	18	
Nanaimo.....	1.88	10	17	2.10	7	8.0	2	8.0	1 5	
Naas.....	8.67	6	17	2.20	11	21.0	5	14.0	7	
Somas River.....	6.32	13	14	1.83	24	9.3	1	9.3	5	
Victoria, W. Works.....	3.14	10	18	0.95	6	0.5	1	0.5	1	
ALBERTA—										
Bittern Lake.....	19	7.5	2	4.5	20	Aurora 9, 10.
Bismark.....	.....	.....	25	.....	.....	6.0	3	4.0	20
Bruderheim.....	.....	.....	26	.....	.....	6.0	2	3.0	6—19
Beaver Hills, W.....	.....	.....	24	.....	.....	3.8	4	2.0	19
Coutts.....	.....	.....	24	.....	.....	6.0	4	2.5	5
Conjuring Creek.....	.....	.....	21	.....	.....	9.0	3	5.5	19
Clover Bar.....	.....	.....	24	.....	.....	2.8	4	1.5	19
Dorence.....	.....	.....	26	.....	.....	8.0	2	8.0	18—19
Grassy Lake.....	.....	.....	27	.....	.....	2.0	1	2.0	24
Heather Brae.....	.....	.....	25	.....	.....	4.8	3	3.2	18—19
Innisfail.....	.....	.....	25	.....	.....	2.7	3	2.2	19
Islay.....	0.001	1	27	0.001	8	.....	.....	.....	.....
Josephburg.....	.....	.....	26	.....	.....	5.0	2	3.0	5
Jumping Pound.....	.....	.....	25	.....	.....	2.6	3	1.5	25
Lacombe.....	.....	.....	22	.....	.....	5.3	6	2.0	26
Magrath.....	0.20	1	26	.....	.....	3.0	1	3.0	26
Macleod.....	.....	.....	25	.....	.....	3.0	3	3.0	1
Morinville.....	.....	.....	26	.....	.....	1.5	2	1.0	28
Mayton.....	.....	.....	26	.....	.....	3.0	2	3.0	19—20
Okotoks.....	.....	.....	27	.....	.....	1.0	1	1.0	26
Ponoka.....	.....	.....	26	.....	.....	2.0	2	1.0	19
Saddle Lake.....	.....	.....	24	.....	.....	0.3	2	0.3	22
Sion.....	0.32	1	26	0.32	8	6.0	3	2.0	20	
Stirling.....	.....	.....	27	.....	.....	2.0	1	2.0	25
Vermilion.....	.....	.....	26	.....	.....	.....	.....	.....	.....
Wabamun.....	0.05	2	21	0.03	8	11.1	5	5.4	18	
Bardo.....	.....	.....	24	.....	.....	2.1	1	1.1	20—21
SASKATCHEWAN—										
Elm How.....	25	4.0	3	2.0	1	Aurora 6, 7, 9, 11, 13, 15, 20, 23.
Insinger.....	.....	.....	26	.....	.....	5.0	2	5.0	1
Last Mountain.....	.....	.....	27	.....	.....	2.0	1	2.0	1
Regina.....	.....	.....	26	.....	.....	2.0	2	1.8	1
MANITOBA—										
Cartwright.....	24	1.5	1	1.0	1	Aurora 6, 7, 9, 11, 13, 15, 20, 23.
Greta.....	.....	.....	26	.....	.....	.....	.....	.....	9
Norquay.....	.....	.....	25	.....	.....	3.0	3	1.0	1
Rapid City.....	.....	.....	24	.....	.....	2.8	4	2.0	1
ONTARIO—										
Arden.....	0.48	4	15	0.27	2	21.0	10	4.0	16	Aurora 11, 11.
Aurora.....	0.21	1	17	0.21	18	9.6	10	5.3	20	
Croydon.....	.....	.....	25	.....	.....	9.0	3	4.0	16
Deer Park.....	.....	.....	21	.....	.....	7.7	7	3.5	21
Emisdale.....	.....	.....	18	.....	.....	16.0	10	6.0	20
Hutton.....	.....	.....	23	.....	.....	5.0	5	3.0	24
Goderich.....	0.41	2	21	0.40	18	7.5	6	3.0	24	
Georgetown.....	0.16	2	9	0.15	19	8.4	20	2.0	20	
Huntsville.....	.....	.....	21	.....	.....	13.5	7	4.5	17
Lansdowne.....	.....	.....	25	.....	.....	5.0	3	2.0	17
Midland.....	.....	.....	29	.....	.....	2.0	10	10.0	14
Montague.....	0.21	1	23	0.21	2	8.0	4	4.0	15	
MacCue.....	.....	.....	23	.....	.....	7.0	5	3.0	15
Orangeville.....	.....	.....	19	.....	.....	5.1	9	2.2	21
Princeton.....	.....	.....	7	.....	.....	12.0	7	5.0	21
Parma.....	0.12	1	24	0.12	20	4.5	3	2.0	25	
Strathroy.....	0.15	4	18	0.50	2	13.0	6	1.0	14	
Sunnyside.....	0.70	1	24	0.70	2	4.0	3	2.0	15	
Sydenham.....	0.20	1	22	0.20	2	15.0	5	6.0	15	
Westport.....	.....	.....	21	.....	.....	11.6	7	3.5	16
Warton.....	R.	.....	15	R.	2	12.0	13	4.0	15
Wyoming.....	.....	.....	26	.....	.....	4.0	2	3.0	20
Westminster.....	.....	.....	21	.....	.....	8.0	1	3.0	20
NEW BRUNSWICK—										
Point Escomiac.....	0.50	2	11	0.50	23	28.9	15	9.2	25—26	

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF FEBRUARY 1907.

	Hours Ending															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria				0.04	0.19	0.24	0.28	0.33	0.46	0.44	0.43	0.29	0.10			
Nanaimo				0.07	0.19	0.19	0.27	0.37	0.31	0.35	0.42	0.39	0.05			
Agassiz				0.09	0.21	0.23	0.29	0.33	0.33	0.33	0.33	0.37	0.10			
Kamloops				0.05	0.11	0.23	0.29	0.29	0.30	0.33	0.29	0.07	0.04			
Battleford				0.18	0.43	0.58	0.65	0.67	0.69	0.69	0.59	0.43	0.02			
Calgary																
Medicine Hat			0.02	0.31	0.46	0.56	0.62	0.65	0.65	0.57	0.46	0.29				
Edmonton				0.06	0.31	0.43	0.50	0.63	0.73	0.71	0.69	0.46	0.14			
Indian Head				0.06	0.33	0.49	0.61	0.65	0.68	0.68	0.66	0.29	0.03			
Brandon				0.08	0.51	0.67	0.79	0.73	0.69	0.63	0.62	0.50	0.19			
Winnipeg			0.04	0.44	0.69	0.82	0.89	0.81	0.76	0.78	0.75	0.59	0.18			
Woodstock				0.08	0.24	0.41	0.44	0.48	0.48	0.41	0.41	0.33	0.21			
Toronto.				0.05	0.39	0.44	0.45	0.48	0.48	0.46	0.53	0.48	0.34	0.07		
Lindsay.				0.16	0.35	0.44	0.41	0.42	0.46	0.48	0.50	0.53	0.47	0.21		
Barrie.			x	0.23	0.40	0.44	0.49	0.48	0.45	0.47	0.49	0.42	0.14			
Gravenhurst..				0.18	0.43	0.48	0.47	0.54	0.55	0.48	0.48	0.51	0.15	0.16		
Halleybury..			x	0.23	0.42	0.51	0.51	0.55	0.55	0.55	0.54	0.44	0.08			
Kingston			0.05	0.29	0.43	0.48	0.52	0.53	0.52	0.51	0.52	0.44	0.22			
Ottawa				0.17	0.39	0.44	0.53	0.49	0.47	0.45	0.46	0.45	0.26			
Montreal				0.06	0.22	0.37	0.40	0.45	0.50	0.45	0.45	0.29	0.06			
Sherbrooke			0.04	0.16	0.32	0.39	0.48	0.58	0.69	0.54	0.51	0.39	0.25	0.04		
Quebec				0.05	0.26	0.43	0.48	0.51	0.51	0.51	0.42	0.43	0.15			
Fredericton				0.19	0.39	0.36	0.50	0.58	0.63	0.59	0.52	0.45	0.31	0.02		
Charlottetown.			0.01	0.13	0.35	0.44	0.49	0.52	0.49	0.52	0.51	0.46	0.39	0.03		

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Battleford.	Medicine Hat.	Edmonton.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Halifax.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.	
Mean proportion for month <i>Constant sunshine being 1</i>	0.29	0.25	0.27	0.20	0.48	0.47	0.49	0.45	0.53	0.66	0.53	0.40	0.42	0.37	0.45	0.43	0.44	0.49	0.35	0.41	0.37	0.43	0.44	
Difference from average.	01	04 + 05		04				19 +	16 +	48 +	03 +	04	05	09		08 +	07	05				00		
Maximum daily amount.	0.87	0.87	0.81	0.64	0.90	0.87	0.88	0.76	0.88	0.94	0.90	0.88	0.96	0.94	1.00	0.88	0.95	0.86	1.00	0.95	0.88	0.93	0.94	
Date.	10	13	16	3	13	28	23	14	6	29	27	22	27	27	22	17	22	23	22	23	26	4	7	28
No. of days clouded	9	10	13	10	2	5	4	1	1	2	10	6	19	8	7	11	8	8	14	6	8	9	8	

* and on 24 25

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

2. Whitehorse, III ; Banff, IV.
4. Whitehorse, II.
5. Whitehorse, II ; Insinger, IV.
6. Gravenhurst, IV ; Renfrew, IV ; Ursa, Cottam, Calvin, Kenora, IV ; Chaplin, IV ; Alameda, Aweme, III ; Georgetown, IV ; Cartwright, III ; Whitehorse, II ; Insinger, IV ; Grayhill, IV ; Hillsdown, IV ; Foxleigh.
7. Truro, II ; Gravenhurst, II ; Grand Manan, IV ; Fredericton, I ; Cottam, Birnam, IV ; Beatrice, IV ; Kenora, IV ; Lucknow, III ; Chaplin, IV ; Cartwright, I ; Rapid City, Paspebiae, II ; St. Stephens, Insinger, IV ; Alameda, IV ; Moose Jaw, Hillsdown, IV ; Minnedosa, III ; Port Stanley, III ; Southampton, IV ; St. John, IV ; Charlottetown, IV ; Sydney, I ; Qu'Appelle, IV ; Foxleigh.
8. Cottam, Chaplin, IV ; Aweme, I ; Rapid City, Paspebiae, Chicoutimi, I ; St. Stephen, Whitehorse, II ; Big Creek, III ; Insinger, III ; Alameda, II ; Waitefield, III ; Gray Hills, IV ; Swift Current, IV ; St. John, IV ; Banff, IV ; Qu'Appelle, IV ; Foxleigh.
9. Truro, I ; Chaplin, I ; Carberry, Aweme, I ; Treherne, Point Esenminae, III ; Cartwright, II ; Rapid City, Whitehorse, II ; Insinger, I ; Grenfell, I ; Beaver Hills W., I ; Threehills Creek, I ; Waitefield, II ; Gray Hill, IV ; Edmonton, II ; Minnedosa, I ; Charlottetown, IV ; Banff, III ; Qu'Appelle, IV ; Foxleigh.
10. Birnam, III ; Macleod, III ; Chaplin, IV ; Whitehorse, III ; Beaver Hills, IV ; Waitefield, II ; Gray Hill, IV ; Winnipeg, III ; Foxleigh.
11. Truro, III ; Gravenhurst, I ; Renfrew, IV ; Grand Manan, IV ; Madoc, I ; Ursa, Brantford, IV ; Barrie, III ; Copper Cliff, Alton, II ; Macleod, Chaplin, I ; Aweme, II ; Treherne, Emsdale, II ; Georgetown, III ; Huntsville, I ; Cartwright, IV ; Whitehorse, II ; Insinger, III ; Threehills Creek, IV ; Waitefield, II ; Gray Hill, Toronto, IV ; White River, II ; Foxleigh.
12. Sutton, W., Chaplin, I ; Aweme, II ; Whitehorse, II ; Insinger, III ; Waitefield, II ; Gray Hill, IV ; Minnedosa, III ; Qu'Appelle, Foxleigh.
13. Chaplin, I ; Aweme, III ; Treherne, Cartwright, II ; Whitehorse, III ; Big Creek, Insinger, IV ; Pakan, Waitefield, IV ; Gray Hill, III ; Banff, IV ; Qu'Appelle, IV ; Foxleigh.
14. Gravenhurst, II ; Renfrew, III ; St. Peters (Sask.), Bruce Mines, II ; Copper Cliff, Alton, III ; Haliburton, Almasippi, Chaplin, I ; Aweme, IV ; Georgetown, IV ; Huntsville, III ; Whitehorse, III ; Threehills Creek, IV ; Waitefield, II ; Gray Hill, III ; Edmonton, II ; Swift Current, Minnedosa, I ; Medicine Hat, I ; Battleford, I ; Banff, II ; Qu'Appelle, Foxleigh.
15. Cottam, Kenora, II ; Sutton, W., Chaplin, IV ; Aweme, I ; Cartwright, IV ; Chicoutimi, Whitehorse, I ; Insinger, IV ; Threehills Creek, IV ; Waitefield, IV ; Swift Current, IV ; Minnedosa, I ; Battleford, III ; Qu'Appelle, IV ; Winnipeg, III ; Foxleigh.
16. Chicoutimi, Whitehorse, III ; Edmonton, IV ; Minnedosa, I ; Qu'Appelle, III ; Foxleigh.
17. Chicoutimi, Whitehorse, I ; Minnedosa, II.
18. Chicoutimi, Whitehorse, II.
19. Kenora, IV ; Aweme, III ; Whitehorse, I ; Insinger, IV ; Minnedosa, IV ; Alton, IV.
19. Cartwright, IV ; Whitehorse, Grenfell, II.
21. Cockburn Island, Whitehorse, Minnedosa, IV.
22. Conrad (*brilliant*), Edmonton, IV.
23. Cartwright, II ; Whitehorse, I ; Insinger, IV ; Pakan, IV ; Waitefield, III ; Gray Hill, IV.
24. Whitehorse, II ; Edmonton, IV ; Minnedosa, III ; Atlin, IV.
25. Whitehorse, II ; Pakan, III.
26. Whitehorse, II.

FORECASTS FOR FEBRUARY, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1131. These were divided as follows :—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per centage.
Alberta	77	96	6	5	89.6
Saskatchewan	77	96	8	3	90.9
Manitoba	77	99	5	3	92.8
Lake Superior	80	67	13	0	86.5
Lower Lake Region	102	78	19	5	85.8
Georgian Bay	103	74	19	10	81.4
Ottawa Valley.	88	67	12	9	82.9
Upper St. Lawrence	89	67	15	7	84.7
Lower St. Lawrence	102	84	16	5	87.2
Gulf.	102	79	19	4	86.8
Maritime Provinces, West	113	91	11	11	85.4
Maritime Provinces, East.	116	91	13	12	84.1
Total	1131	866	156	79	86.1

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto, }
27th March, 1907. }

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

MARCH, 1907.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather in British Columbia was somewhat colder than usual and temperatures below the freezing point occurred almost every night over the upper mainland and quite frequently over the lower mainland and islands. During the first two or three days of the month dull weather prevailed over the Upper Mainland and Islands with occasional rain or snow after which it was mostly fair to the 19th when unsettled weather again set in and precipitation was somewhat frequent, excepting from the 23rd to 26th when it was fair. Over the Upper Mainland rain and snow occurred in most districts on or about the 2nd and 11th, also frequently from the 13th to 24th and 29th to 31st. The proportion of bright sunshine exceeded the average, but there was little growth during the month and vegetation was quite backward.

In the Western Provinces the weather, though frequently quite cold at night, was comparatively mild during day throughout the greater portion of the month. After the 18th temperatures between 40° and 50° were recorded upon several days at many places, the latter figure also being exceeded quite locally on or about the 22nd and 23rd. Dull weather with local falls of snow occurred on the 1st and 2nd, and quite fine weather was recorded from the 3rd to 8th: after which light falls of rain or snow were somewhat frequent and continued to the 14th. There was also falls of snow on or about the 18th, 24th and 31st. During the intervening periods there was much fine weather and the mean proportion of bright sunshine exceeded the average. On the 31st the snow had gone in southern Alberta, and elsewhere the ground was almost bare.

The weather in Manitoba, like that in Saskatchewan, though comparatively mild during the day was quite cold at night, the temperature frequently falling well below zero. From the 20th to 31st 40° was occasionally exceeded at many places. The precipitation, which included some rain on the 21st and 24th and which was recorded on or about the 1st, 4th, 6th, 11th, 14th to 18th, 21st and 24th to 27th was excessive. During the intervening periods the weather was mostly fair, and in the western portion of the province there was much bright sunshine. On the 31st the depth of snow on the ground varied between a mere trace and eight inches.

In Ontario the weather was unusually mild the temperature frequently rising above 40° at most places and occasionally above 60° at some stations after the 21st. From the 9th to 21st there was much fine weather but the mean proportion of bright sunshine was below the average. The precipitation which was heavy in south-western districts and in Muskoka, and which was accompanied during the last week by thunderstorms, occurred in most localities between the 1st and 6th, also on or about the 12th, 14th, 17th and occasionally during the last week. At the close of the month the ground was bare in the southwestern portion of the province, but in more northerly districts the ground was still well covered. Some signs of quickening vegetation were noticeable during last week.

The weather in the Province of Quebec was somewhat milder than usual excepting in the extreme eastern portion where on the contrary the mean temperature in most districts was slightly below the average. In the western portion of the Province the temperature occasionally rose above 40° after the 10th and 50° was exceeded during this period. During the first half of the month comparatively fine weather prevailed, but during the second half the sky was mostly overcast. The chief precipitation occurred on or about the 2nd, 5th, 9th and occasionally after the 14th. Rain was recorded at many

places during the last week and this somewhat affected the snow upon the ground, nevertheless, the depth on the 31st at Quebec was twenty-five inches.

The weather in New Brunswick was quite cold during the first ten or eleven days, the temperature occasionally falling below zero. After the 11th temperatures above 32° were generally recorded, and 40° was also exceeded on several dates, more especially after the 21st. On the 29th and 30th between 50° and 55° was noted at some stations. Fine bright weather prevailed and the precipitation which occurred chiefly on or about the 2nd, 14th, 15th, 17th and 20th, was quite light in the aggregate. The depth of snow on the ground on the 31st varied between 24 inches in northern districts and 3 inches in the southern portion.

In Nova Scotia the weather was quite cold, and although it was comparatively mild during the day after the 12th when the temperature occasionally rose above 40°, the nights were generally cold. Dull weather prevailed, but the precipitation which was recorded on or about the 3rd, 15th, 16th, 17th, 20th and 28th, was in the aggregate considerably less than the average at most places. Several severe snowstorms were recorded, but on the 31st the ground was almost bare in southern districts.

The weather in Prince Edward Island was unusually cold and stormy during the first half of the month and the temperature fell below zero almost daily from the 1st to 6th. After the 15th milder weather prevailed and there were several heavy falls of rain. Some exceedingly fine weather occurred between the 8th and 12th and 24th and 27th; and the precipitation which was deficient was recorded at most places on or about the 3rd, 6th, 13th, 17th, 20th, 23rd and 29th. At the close of the month the ground was almost bare.—F. F. PAYNE.

ATMOSPHERIC PRESSURE.

Subnormal values of the mean atmospheric pressure for March occurred from the Pacific Coast to and including New Ontario; elsewhere in Canada values were supernormal. The extremes of departure from normal were—0.19 of an inch at Battleford, Sask. and + 0.10 of an inch at Yarmouth, N. S.

HIGH AREAS.

Twelve areas of high barometric pressure were charted during the month and the greater number exhibited as much energy as did the systems in February.

The general course of the areas was from the far north-western portion of the continent, southeastward across the Lake Region to the Atlantic.

Eight systems moved into the field of observation in the Yukon Territory, two over the Middle Pacific States and two apparently developed over the Middle Rocky Mountain slope.

Some very severe cold periods were experienced in most districts during the passage of the more pronounced of the systems.

LOW AREAS.

Sixteen areas of low pressure were charted during the month, all but one first appearing either over the western or north-western portion of the continent. Three of the systems passed from the far northern Alaskan coasts southeastward into the Canadian western provinces and two others moved into the continent well to the northward on the British Columbian coast. Many of the areas were very energetic and widespread and not infrequently showed two or more foci. The great storm developments which so often occurred after the areas had left the Middle Atlantic or New England States as they passed either over or a little to the southward of the Maritime Provinces and thence across Newfoundland were quite remarkable, the type recurring with much persistency.

WINDS.

In British Columbia on Vancouver Island and over the mainland the direction was variable but slightly favouring the south and west with ten days with strong and ten with fresh breezes and two gales.

In Alberta and Saskatchewan the direction was variable with ten days with strong and twelve with fresh breezes and three gales.

In Manitoba the direction although more or less variable inclined somewhat to the north and west with six days with strong and twelve with fresh breezes and six gales the latter as a rule of a very moderate type.

In the Lake Region the westerly direction slightly predominated with twelve days with strong and seven with fresh breezes and six gales.

In the Ottawa and upper St. Lawrence valleys the south and west directions were most in evidence with thirteen days with strong and eight with fresh breezes and four gales.

In the Lower St. Lawrence Valley and the Gulf the direction although often variable favoured to a certain extent the north and west with eleven days with strong and eight with fresh breezes and four gales.

In the Maritime Provinces the direction was variable, the easterly being quite frequent, with five days with strong and sixteen with fresh breezes and five gales.

The gales in the Maritime Provinces occurred on the 2nd, 7th, 12th, 17th, and on the 20th, the latter being of great violence attended by a heavy snowfall. The storm on the 7th was likewise very severe in the eastern portions of Nova Scotia. Warnings were duly issued for the five storms, but a warning for a moderate storm issued on the 23rd was not subsequently justified by dangerous winds except very locally.

TEMPERATURE.

The temperature was below the average in British Columbia and the northern portion of Alberta, locally slightly below in Saskatchewan, average or a little below in eastern Quebec, and below the average in the Maritime Provinces. Elsewhere in the Dominion it was above the average. The chief negative departures occurred in the northern portions of British Columbia and Alberta and in Prince Edward Island and Cape Breton, and amounted to from 4 to 5 degrees. The most marked positive departures were, Manitoba from 4 to 5 degrees and the greater portion of Ontario from 4 to 8 degrees.

The Highest and Lowest temperatures in each Province during March, 1907, were :

British Columbia,	68° ·1 on 9th at Alberni,	—24° ·0 on 29th at Atlin.
Alberta,	64° ·0 on 31st at Medicine Hat,	—23° ·5 on 12th at Kneehill.
Saskatchewan,	54° ·0 on 22nd at Lemberg,	—23° ·4 on 1st at Lloydminster.
Manitoba,	50° ·0 on 22nd at Oakdale Park,	—22° ·0 on 5th at Carberry.
Ontario,	75° ·0 on 22nd at Cottam,	—28° ·0 on 1st at Rockliffe.
Quebec,	57° ·0 on 28th at Brome,	—31° ·0 on 4th at Abitibi.
New Brunswick,	56° ·5 on 30th at St. Stephen,	—34° ·0 on 1st at Woodstock.
Nova Scotia,	57° ·0 on 31st at Wolfville,	— 9° ·0 on 5th at Parrsboro.
Prince Edward Island.	44° ·5 on 29th at Charlottetown,	— 14° ·0 on 5th at Summerside.

PRECIPITATION.

The precipitation was deficient throughout the greater portion of Canada. In Manitoba the amount recorded was generally in excess of the average, as was also the case in the Georgian Bay Region and New Ontario. In all the Provinces, except New Brunswick and Prince Edward Island, some local exceptions to the general conditions were noted.

DEPTH OF SNOW.

In the southern portions of British Columbia, the extreme south-western portion of the Maritime Provinces, and in the Peninsula of Ontario the ground was generally bare of snow at the close of the month, but over a large portion of the Dominion there was still a considerable covering. Cariboo reports as much as 68 inches on the lower levels and far greater depths on the mountains; Alberta, from a trace in southern localities to 9 inches in northern; Saskatchewan, from 4 to 10 inches; Manitoba, from a trace to 8 inches. The northern portions of Ontario from 2 to 9 inches. Quebec from 6 to over 24 inches, and the Maritime Provinces as much as 24 inches in northern districts.

THICKNESS OF ICE.

By the close of the month the ice had either broken up or become very rotten in many portions of Ontario, elsewhere it was reported as follows: Edmonton, Battleford and Swift Current, 30 inches; Medicine Hat, 8 inches; White River, 21 inches; Bruce Mines, 22 inches; Ottawa, 10 inches; Chatham, N.B., 22 inches; Sydney, 24 inches; Charlottetown, 15 inches.

BRIGHT SUNSHINE.

A supernormal value of the Bright Sunshine for March was recorded in British Columbia, Southern Saskatchewan, Manitoba and also locally in Eastern Ontario, elsewhere in Canada the amount registered was subnormal. The extremes of departure from average were + 9% at Victoria, B.C. and Man., and —11% at Battleford, Sask.

The maximum daily amount was 97% on the 20th at Lindsay, Ont.

[illegible]

* Stations not furnished with registering thermometers.
 † Barometer not reduced to Sea Level.

a barometer not reduced to sea level. * Stations not furnished with registering thermometers.

ONTARIO—Continued.

Stratford	42	23	81	0	1149	32.5	+ 6.5	41	61.0	30	4.0	848.2	83	6	9	11	10	13	16	2	35	19	35	12	186	13.6	28.5	2.8W	1.08	+ 0.45	1.30	6.21	0	0	0
Woodstock	43	8	80	17	980	32.4	+ 8.0	32	65.0	29	6.0	419.1	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6		
Welland	42	30	79	17	577	35.5	+ 5.5	21	69.0	29	3.0	748.0	67	5	1	6	12	6	1	8	11	29	10	33	3	62	11	20	0	0	0	0	0		
Windsor	42	30	83	4	625	37.7	+ 5.3	32	72.0	22	10.0	448.1	10	10	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Windsor	42	30	82	21	590	37.5	+ 5.3	32	72.0	22	10.0	448.1	10	10	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Agincourt	43	47	79	16	590	31.3	+ 3.8	12	61.0	29	0.0	748.0	10	10	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Bloomfield	43	59	77	21	290	31.3	+ 3.8	12	61.0	29	0.0	748.0	10	10	2	7	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
East Toronto	44	13	76	29	285	30.7	+ 3.5	33	51.0	29	1.8	713.6	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6		
Kingston	43	40	79	24	330	32.6	+ 1.6	10	61.0	28	5.0	616.2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Lakeside Home	43	40	79	24	330	32.6	+ 1.6	10	61.0	28	5.0	616.2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Port Hope	43	40	79	24	330	32.6	+ 1.6	10	61.0	28	5.0	616.2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Toronto	43	40	79	24	330	32.6	+ 1.6	10	61.0	28	5.0	616.2	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Bancroft	45	1	77	30	722	25.9	+ 4.7	18	58.0	27	20.0	622.1	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	
Conant	45	23	77	21	290	27.5	+ 3.4	19	59.0	27	1.0	164.9	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6		
Halliburton	45	1	78	28	1050	30.1	+ 2.6	62.1	27	6.0	748.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6		
Kinmount	44	45	78	28	1050	30.1	+ 2.6	62.1	27	6.0	748.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6		
Lindsay	44	20	78	45	872	28.5	+ 1.3	22	65.0	28	3.0	159.1	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6		
Lakeland	44	25	77	20	562	28.9	+ 2.6	50.0	28	6.0	748.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6		
Madoc	44	30	77	20	562	28.9	+ 2.6	50.0	28	6.0	748.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6		
North Gower	45	8	75	42	294	26.8	+ 0.8	21	46.0	27	0.0	123.1	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	
Ottawa	45	26	75	42	294	26.8	+ 0.8	21	46.0	27	0.0	123.1	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	9	2	5	
Otonabee	44	20	78	18	671	23.1	+ 1.5	11	60.0	27	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6	
Peterboro	44	17	78	19	722	23.1	+ 1.5	11	60.0	27	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6	
Rockliffe	44	20	78	18	671	23.1	+ 1.5	11	60.0	27	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6	
Rockliffe	44	20	78	18	671	23.1	+ 1.5	11	60.0	27	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	6	
Renfrew	45	26	76	30	886	25.4	+ 1.7	40.5	29	21.0	122.6	85	5	5	1	7	11	1	1	1	9	14	3	0	92	11	20	0	0	0	0	0	0		
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6	6	6	6	6	6	6	6	6	
Uxbridge	44	5	75	8	886	29.7	+ 3.6	60.0	29	10.0	22	10.0	720.0	7	11	2	16	1	6	5	15	8	6	6	6	6									

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MARCH, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	Pressure.		Temperature.						No. of days completely clouded.	Direction of Wind from								Variety in Wind.			Precipitation.			No. of days with rain or snow.															
				Mean reduced.	Range.	Mean.	Difference from average.	Highest.	Date.	Lowest.	Date.		Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.		Mean velocity per hour.	Highest day's velocity.	Date and direction.	Amount.	Difference from average.	Days with rain or snow.	No. of days with rain or snow.								
NOVA SCOTIA																																										
Bridgetown	43 09	65 16	20	29.94	30.51	28.75	1.76	29.22	2.33	55	8	30	0.3	1	1.06	3			6	8	7	23	5	0	6	7	8	1	62	3	36	2	11	0	94	11	17	0	2			
Halifax	44 39	63 36	88	29.99	30.51	28.75	1.76	29.22	2.33	55	8	30	0.3	1	1.06	3			6	8	7	23	5	0	6	7	8	1	62	3	36	2	11	0	94	11	17	0	2			
Antigonish	45 29	61 22	40					25.1	2.5	16	19	26	31	30	5.18	1			15	15	1	9	0	0	1	2	0	0	0	31	3	16	1	20	1	27	0	0	0	0		
Port Hastings	45 29	61 19	40					21.9	6.1	11	18	9	31	30	5.18	1			15	15	1	9	0	0	1	2	0	0	0	31	3	16	1	20	1	27	0	0	0	0		
Port Hurd	45 29	61 19	40					21.9	6.1	11	18	9	31	30	5.18	1			15	15	1	9	0	0	1	2	0	0	0	31	3	16	1	20	1	27	0	0	0	0		
Sydney	46 10	60 10	35	29.98	30.46	28.91	1.55	29.26	4.44	19	0	29	6.0	29	9.18	2			7	15	3	5	3	2	2	13	8	11	11	4	62	4	20	1	20	1	27	0	0	0	0	
Sable Island, E. Point	45 55	62 16	25	30.3	30.46	28.91	1.55	30.3	2.42	11	0	29	13.0	29	10				6	4	18	15	5	5	16	1	13	13	13	10	3	56	0	15	0	21	20	2	1	2		
Sable Island, M. Station.	45 55	62 16	25	30.3	30.46	28.91	1.55	30.3	2.42	11	0	29	13.0	29	10				6	4	18	15	5	5	16	1	13	13	13	10	3	56	0	15	0	21	20	2	1	2		
at Truro	45 12	63 18	40					25.6	5.52	0	25	12	30	30	1.06	2			6	6	16	14	8	4	6	1	8	8	8	4	62	1	20	0	11	20	2	1	2			
Windsor	44 59	61 16	40					25.6	5.52	0	25	12	30	30	1.06	2			6	6	16	14	8	4	6	1	8	8	8	4	62	1	20	0	11	20	2	1	2			
Wolfeville	45 15	61 20	28					27.1	2.4	10	57	0	31	30	6.17	1			6	6	16	14	8	4	6	1	8	8	8	4	62	1	20	0	11	20	2	1	2			
Whitehead	45 15	61 18	28					27.1	2.4	10	57	0	31	30	6.17	1			6	6	16	14	8	4	6	1	8	8	8	4	62	1	20	0	11	20	2	1	2			
Yarmouth	45 50	63 2	65	30.02	30.46	28.75	1.75	29.5	1.02	53	5	29	8.0	29	5.12	3			6	6	16	14	8	4	6	1	8	8	8	4	62	1	20	0	11	20	2	1	2			
P. E. ISLAND																																										
Charlottetown	46 14	63 10	38	29.99	30.46	28.75	1.75	29.5	3.6	32	11	29	7.0	29	6.15	5			6	5	7	12	0	6	2	5	1	10	19	62	1	20	0	70	11	20	2	0	0			
Hamilton	46 23	63 18						18.3							7.15	4					4	3	2	2	3	9	5	3	0	31	0	31	0	31	0	31	0	31	0	31		
Summerside	46 18	63 51						20.9							5.18	1					4	3	2	2	3	9	5	3	0	31	0	31	0	31	0	31	0	31	0	31		
NEWFOUNDLAND																																										
*Amour Point	51 28	56 51						22.0	3.2	25	38	0	31	30	1.12	5					7	13	11	8	6	2	34	12	0	43	0	43	0	43	0	43	0	43	0	43		
*Chapel	47 37	59 59	50					13.8	1.0	24	28	0	29	29	8.0	1					13	18	0	6	6	15	6	29	0	43	0	43	0	43	0	43	0	43	0	43		
*Cape Norman	54 38	55 52						15.8	5.7	25	30	0	29	29	16.0	1					25	15	12	2	1	3	31	4	0	43	0	43	0	43	0	43	0	43	0	43		
*Point Rich	50 12	57 25						24.1	3.1	35	11	0	29	29	5.0	1					15	15	3	5	17	3	12	3	0	62	0	62	0	62	0	62	0	62	0	62		
*St. John's	47 34	52 42	125	29.78	30.15	28.91	1.54	29.1	3.1	35	11	0	29	29	5.0	1					15	15	3	5	17	3	12	3	0	62	0	62	0	62	0	62	0	62	0	62		
BERMUDA																																										
Prospect	32 17	61 30	151	30.13	30.48	29.68	0.79	29.6	0.4	16	78	0	30	30	4	7					6	1	3	12	5	2	9	6	15	3	62	1	35	3	43	0	62	13	18	0	2	0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING MARCH, 1907.

STATION.	RAIN FALL					SNOW FALL				REMARKS.
	Amount in inches	No. of Days, 01. or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Cocquidlam.....	3.66	10	20	0.79	2	0.5	1	0.5	14	
Denman Island.....	3.90	8	20	1.30	1	0.5	1	0.5	15	
Goldstream Lake.....	2.25	11	11	0.38	31	4.5	6	6.0	14	
Hartley Bay.....	0.80	2	20	0.50	2	14.5	7	12.5	30	
Naas Harbour.....	0.56	1	24	0.36	3	14.0	6	5.0	20	
Nanaimo.....	1.91	7	16	0.53	22					
Somas River.....	1.91	13	17	1.00	23	5.5				
Royal Oak.....	1.76	8	22	0.80	11	0.5	1	0.5	11	
ALBERTA—										
Countess.....						9.0	5	3.0	10	
Bardo.....						2.5	3	2.0	11	
Beaver Hills, W.....						1.8	8	3.0	15	
Bismark.....						5.5	8	3.5	15	
Bruderheim.....						3.0	2	2.5	15	
Bittern Lake.....						7.0	2	5.0	15	29th. - 24
Clover Bar.....						5.0	5	1.0	16	
Conjuring Creek.....						6.2	3	1.5	15	25th, below zero.
Heather Brae.....						8.7	7	1.8	15	30th. 10
Islay.....						2.8	1	1.2	16	
Innisfail.....						0.0	6	2.0	9	
Josephburg.....						10.0	5	3.0	26	
Jumping Pound.....						5.7	11	2.1	31	
Lacombe.....						1.5	5	1.0	15	
Macleod.....	0.19	1	20	0.19	18	12.0	8	3.0	7	28
Magrath.....						13.0	7	3.0	28	Ground frozen to depth of 1 ft.
Mayton.....						7.0	2	4.0	8	
Morinville.....						1.3	2	0.5	13	
Okotoks.....						10.8	11	2.8	1	
Ponoka.....						6.0	6	3.0	18	
Sion.....						10.0	8	4.0	15	Slight hail on 31st.
Stirling.....						8.0	3	3.0	11	25
Saddle Lake.....						4.0	3	3.0	15	
Vermilion.....						3.0	4	1.0	16	17
Wabamun.....						7.4	8	5.5	15	
Dorelee.....						7.0	4	2.8	15	
Grassy Lake.....						3.5	2	3.0	2	
SASKATCHEWAN—										
Elm How.....						6.5	3	3.0	18	
Insinger.....						14.5	1	5.0	18	21
Regina.....	0.2	1	20	0.02	21	4.0	6	3.0	18	Fog on 22nd. Fog on 5th.
Last Mountain.....						1.5	1	1.5	24	
MANITOBA—										
Carlwright.....						13.5	5	5.0	18	26
Gretna.....	0.28	2	22	0.18	21	9.0	1	1.5	11	
Norquay.....						10.0	5	6.0	26	
Rapid City.....	0.21	1	20	0.21	21	11.8	8	5.2	27	Blizzard on 18th.
ONTARIO—										
Aurora.....	1.11	7	18	0.31	26	5.0	1	3.1	5	Thunder on 25, 26, 27.
Arden.....	1.71	9	19	0.72	2	1.0	1	1.0	1	Thunder on 24, 28.
Croydon.....	1.76	6	24	0.70	25	1.0	1	1.0	31	Thunder on 25, 26.
Deer Park.....	1.55	7	22	0.17	27	2.5	2	2.5	5	Thunder on 25, 26, 27.
Dutton.....	1.33	3	24	0.52	27	7.0	2	5.0	19	Thunder on 25, 27.
Emsdale.....	2.02	8	19	0.19	25	8.5	1	1.5	3	Fog on 27. Thunder on 23, 27.
Goderich.....	1.71	6	22	0.00	1	2.0	3	1.0	7	
Georgetown.....	2.21	9	10	0.33	26	2.6	13	0.9	5	Fog on 1, 12, 19, 25, 27. Thunder on 23, 24, 26, 27.
Huntsville.....	2.23	6	19	1.00	21	10.5	7	3.5	2	Thunder on 23.
Lansdowne.....	1.39	3	10	0.80	2					Thunder on 23, 28, 29.
Macleod.....	1.65	1	27	1.00	21					
Midland.....		No record kept.				6.5	2	3.5	5	Thunder on 23, 24, 27.
Montague.....	0.38	3	27	0.16	23	1.0	2	1.0	19	8th, ice 24 ft. thick on river.
Orangeville.....	2.69	5	24	0.69	27	2.3	2	1.2	6	Thunder on 26, 27.
Parma.....	2.57	6	24	0.70	25	9.5	1	0.5	15	
Princeton.....	2.85	3	23	1.11	26	8.5	1	3.0	19	Thunder on 21.
Sydenham.....	2.41	5	26	0.94	2					
Strathroy.....	2.42	12	16	0.78	2	9.6	4	4.0	7	19
Wyoming.....	0.80	5	23	0.30	12-27	5.0	3	3.0	8	Thunder on 23, 25, 26. Thunder on 27.
Watford.....	1.18	4	27	0.52	1					
Westport.....	0.25	1	24	0.25	29	5.3	5	2.0	19	24
Wooler.....	1.11	6	22	0.37	2-27	1.0	3	1.0	5	Thunder on 24, 27, 29. Thunder on 23. Fog on 13, 25.
Westminster.....	1.33	3	22	0.18	12	7.5	5	3.5	19	Thunder on 26.
Warton.....	2.19	6	18	0.96	23		7			Thunder on 23, 26. Fog on 28
QUEBEC—										
Gaspé.....	0.11	3	22	0.30	21	24.0	6	8.0	12	Thunder on 26.
NEW BRUNSWICK—										
Point Esequimaie.....	0.13	1	23	0.1	17-28	27.4	3	18.1	20	20th, worst winter storm ever recorded.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF MARCH 1907

STATIONS	HOURS ENDING															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria			0.02	0.32	0.51	0.53	0.51	0.56	0.71	0.88	0.56	0.51	0.43	0.15		
Nanaimo			0.03	0.32	0.41	0.46	0.51	0.56	0.54	0.43	0.33	0.35	0.48	0.06		
Agassiz				0.15	0.31	0.46	0.44	0.44	0.42	0.32	0.28	0.25	0.19			
Kamloops			0.01	0.21	0.42	0.47	0.56	0.63	0.57	0.46	0.45	0.45	0.32			
Savonas																
Battleford				0.09	0.32	0.49	0.54	0.58	0.66	0.63	0.63	0.41	0.02			
Calgary																
Medicine Hat		0.03	0.30	0.45	0.67	0.69	0.73	0.69	0.67	0.72	0.66	0.33	0.17	0.02		
Edmonton			0.01	0.28	0.43	0.69	0.70	0.74	0.71	0.68	0.68	0.62	0.45	0.09		
Indian Head			0.04	0.08	0.35	0.51	0.59	0.66	0.69	0.61	0.63	0.50	0.26	0.03		
Brandon			0.03	0.23	0.52	0.63	0.73	0.79	0.71	0.60	0.67	0.61	0.48	0.12		
Winnipeg			0.08	0.38	0.62	0.62	0.65	0.68	0.70	0.75	0.62	0.57	0.33	0.21	0.05	
Woodstock			0.00	0.16	0.32	0.37	0.32	0.32	0.39	0.36	0.39	0.25	0.21	0.02		
Toronto				0.13	0.33	0.44	0.36	0.36	0.45	0.50	0.46	0.41	0.37	0.19		
Lindsay			0.08	0.18	0.28	0.40	0.47	0.50	0.44	0.31	0.41	0.37	0.31	0.27	0.02	
Barrie			0.01	0.26	0.38	0.45	0.49	0.52	0.50	0.50	0.38	0.41	0.40	0.04		
Gravenhurst																
Halleybury			0.04	0.22	0.41	0.46	0.51	0.54	0.51	0.55	0.57	0.50	0.35	0.03		
Kingston			0.11	0.36	0.43	0.51	0.56	0.52	0.48	0.45	0.44	0.45	0.29	0.06		
Ottawa			0.05	0.35	0.45	0.50	0.46	0.48	0.51	0.57	0.52	0.48	0.38	0.09		
Montreal			0.07	0.30	0.43	0.43	0.49	0.49	0.52	0.45	0.45	0.37	0.18	0.10		
Sherbrooke		0.01	0.20	0.41	0.50	0.58	0.56	0.53	0.49	0.50	0.51	0.45	0.26	0.12		
Quebec			0.05	0.32	0.36	0.43	0.49	0.49	0.51	0.51	0.51	0.48	0.43	0.14		
Fredericton			0.08	0.38	0.43	0.50	0.53	0.53	0.55	0.55	0.63	0.60	0.49	0.24		
Charlottetown			0.01	0.20	0.33	0.56	0.55	0.55	0.51	0.51	0.52	0.45	0.33	0.04		

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savona.	Battleford.	Calgary.	Medicine Hat.	Edmonton.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haliburton.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month Constant sun shine being 1	0.47	0.42	0.27	0.39		0.37	0.53	0.50	0.41	0.52	0.51	0.25	0.33	0.34	0.39		0.30	0.39	0.49	0.40	0.41	0.39	0.46	0.41	
Difference from average.	0.00	-	+0.02			0.11			+0.07	+0.09	+0.05	0.05	0.09	0.08	0.01			0.01	0.04	0.05	-	-	0.01		
Maximum daily amount.	0.87	0.91	0.80	0.90		0.72	0.93	0.87	0.86	0.86	0.92	0.88	0.88	0.95	0.88		0.93	0.92	0.87	0.93	0.91	0.90	0.92	0.91	
Date	9	6	4	6		1	1	5	25	30	9	6	6	20	6		6	20	6	10	25	9	7	7	
No. of days clouded.	3	4	12	4		6	1	4	6	5	3	10	5	7	6		6	6	6	8	5	6	6	4	

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

5. Treherne, Chaplin, Gray Hill, IV.
6. Gray Hill, IV.
7. Paspebiac, IV ; Treherne, Waitefield, IV ; Macleod, III ; Cape Norman, III.
8. St. Albans, III ; Estevan, Nicola.
9. Paspebiac, II ; Haliburton, Ursa, Birnam, IV ; Cockburn Island, II ; Bruce Mines, IV ; Lake Talon, North Bruce, St. Albans, I ; Treherne, Estevan, St. Peters, IV ; Gray Hill, III ; Pakan, III ; Waitefield, II ; Threehills Creek, IV ; Kneehill, Princeton, B.C., Big Creek, III ; Insinger, IV ; Cartwright, IV ; Emsdale, III ; Huntsville, III.
10. Chicoutimi, Paspebiac, IV ; Ursa, Madoc, III ; Birnam, III ; Clinton, III ; Bruce Mines, IV ; Lake Talon, Lucknow, North Bruce, Alameda, IV ; Chaplin, Threehills Creek, IV ; Salmon Arm, Nicola, Emsdale, I ; Georgetown, IV ; Huntsville, II ; Cape Norman, II.
11. Chicoutimi, Paspebiac, IV ; Cape Magdalen, Haliburton, Madoc, IV ; Savonas, I (very fine) ; Lake Talon, Lucknow, St. Albans, I ; Alameda, IV ; Gray Hill, II ; Hillsdown, III ; Pakan, III ; Waitefield, III ; Threehills Creek, I ; Kneehill, Tzouhalem, Salmon Arm, Quesnelle, Princeton, B.C., Big Creek, II ; Ladner, Nelson, Hedley, Alberni, IV ; Bella Coola, IV ; Denman Island, Cartwright, II ; Emsdale III ; Georgetown, IV ; Huntsville, II ; Cape Norman, II.
12. Chicoutimi, Paspebiac, IV ; Sutton West, Oakdale Park (fine), St. Albans, IV ; Spences Bridge, Ladner, Insinger, IV.
13. Ladner.
15. Chaplin, IV ; Gray Hill, III.
16. Gray Hill, III ; Waitefield, III ; Cape Norman, II.
19. Gray Hill, IV.
20. Waitefield, II.
21. Chaplin, IV ; Gray Hill, II ; Waitefield, IV.
22. Pakan, III ; Cape Norman, II.
24. Waitefield, II.
26. Hillsdown, IV.

Thunder recorded on :

21. Oakbank, Oakdale Park.
23. Brome, Haliburton, Lakefield, Madoc, Peterboro', Brantford, Birnam, Uplands, Orillia, Cockburn Island, Clinton, Bruce Mines, Meaford, Lucknow, Owen Sound, Deer Park, Emsdale, Georgetown, Huntsville, Lansdowne, Midland, Strathroy, Wooler, Wiarton.
24. Beatrice, Lakefield, Ursa, Madoc, Paris, East Toronto, Sutton West, Arden, Georgetown, Midland, Princeton, Westport.
25. Haliburton, Cockburn Island, Bruce Mines, Meaford, Aurora, Croydon, Dutton, Strathroy.
26. Alton, Beatrice, Ursa, Port Dover, Port Burwell, Paris, Hamilton, Brantford, Birnam, Agincourt, Port Hope, East Toronto, Sutton West, Barrie, Cockburn Island, Clinton, Bruce Mines, Meaford, Lucknow, Copper Cliff, Owen Sound, Aurora, Croydon, Deer Park, Georgetown, Orangeville, Strathroy, Westminster, Wiarton, Gaspé.
27. Brome, Abitibi, Haliburton, Ursa, Madoc, Peterboro', Port Burwell, Hamilton, Brantford, Agincourt, East Toronto, Sutton West, Lucknow, Aurora, Deer Park, Dutton, Emsdale, Georgetown, Midland, Orangeville, Wyoming, Westport.
28. Brome, Chicoutimi, Cape Chatte, Beatrice, Madoc, Port Burwell, Port Hope, Arden, Lansdowne.
29. Abitibi, Lansdowne, Westport.

FORECASTS FOR MARCH, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1147. These were divided as follows :—

District.	No. Issued	Verified.			Per- centage
		No. Fully	No. Partly	No. Not	
Alberta	80	66	11	3	89.4
Saskatchewan	80	58	19	3	84.4
Manitoba	83	65	14	4	84.3
Lake Superior	80	65	16	8	82.0
Lower Lake Region	91	72	16	3	84.4
Georgian Bay	91	71	18	2	86.4
Ottawa Valley.	18	11	18	0	81.6
Upper St. Lawrence	98	73	18	7	83.7
Lower St. Lawrence	89	65	15	9	81.5
Gulf.	92	71	13	8	84.2
Maritime Provinces, West	125	92	23	10	82.8
Maritime Provinces, East.	125	88	30	7	82.4
Total	1147	835	211	81	83.7

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STIMPART,

Director.

Meteorological Office, Toronto.

26th April, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

APRIL, 1907.

No. 4.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather over the lower mainland and islands of British Columbia was quite cool and unsettled during the first ten or twelve days and light frosts occurred at a few places in northern districts. Somewhat milder weather then set in and continued to the end of the month, the last nine or ten days being comparatively warm. Much rain occurred during the unsettled period mentioned, also on or about the 16th, but after the 10th the weather was mostly fine and the mean proportion of bright sunshine exceeded the average. Vegetation was somewhat backward on the 30th. Over the upper mainland the weather conditions were almost similar to those in districts to the westward, it being cold and unsettled during the first nine or ten days, but frosts at night were more frequent and the precipitation over the higher levels of the mountains was chiefly snow.

In the Western Provinces the chief characteristic of the weather was the low temperature which prevailed, it being quite phenomenal in the Province of Saskatchewan. On or about the 16th and 19th, temperatures below zero were recorded at some places in this province. From the 2nd to 4th, the weather was mostly cloudy and there were falls of snow, after which much bright sunshine was recorded up to the 14th. On the latter date the weather again became unsettled and snow was recorded occasionally at many places up to the 18th. From this time onward the weather was mostly fine. On the 30th, vegetation was exceedingly backward.

The weather in Manitoba, like that in Saskatchewan, was phenomenally cold and high winds were also of frequent occurrence. From the 3rd to 6th, 10th to 16th, and 24th to 29th, snow occurred almost daily at most places; and although there was much fine weather during the intervening periods the proportion of bright sunshine was below the average, excepting at Winnipeg where, on the contrary, it was slightly above. Sleighing was possible in many districts until quite late in the month, and on the 30th vegetation was exceedingly backward.

In Ontario the weather was characterised by unusually low temperatures, frosts occurring almost every night. On or about the 20th and after this date, 50° was occasionally exceeded during the day, and during the last three days between 60° and 70° was recorded at some stations. The precipitation which at most places included snow, and which was excessive in most districts, occurred chiefly on or about the 4th, also occasionally from the 7th to 16th, and on the 25th and 30th. Fine weather was recorded during the first two or three days, also from the 18th to 24th; and it was occasionally fine on other dates, but the mean proportion of bright sunshine was below the average generally. In northern districts much snow still remained on the ground at the end of the month, and vegetation throughout the Province was quite backward.

In the Province of Quebec the weather was somewhat colder than usual in the eastern portion of the Province and quite cold in western districts. After the 20th, milder conditions prevailed, and in western counties the temperature occasionally exceeded 50°. North-easterly gales accompanied by snow were recorded on the 5th and 9th, snow or rain also occurring at most places on or about the 1st, 2nd, 24th, 25th, 26th and 30th. On the last day of the month much snow still remained in the woods, and up to a late date the ground was also frozen which retarded vegetation considerably.

The weather in New Brunswick though cold during the first half of the month was comparatively mild during the second half and the mean temperature did not depart much from the normal. The precipitation which was generally excessive, and which included some snow, occurred chiefly on or about the 2nd, 6th, 9th, 14th, 24th and 26th. During the intervening periods there was much bright sunshine. High winds were somewhat frequent. Some snow still remained in the woods at the end of the month and vegetation had made little progress.

In Nova Scotia changes of temperature were somewhat frequent and rapid, but after the 15th, the weather was comparatively mild, and the mean temperature of the month was not much below the average. Dull weather generally prevailed, but from the 15th to 23rd there was much bright sunshine. Precipitation, though deficient in the aggregate, was of frequent occurrence, the chief falls being recorded about the 1st to 3rd, 6th, 9th to 15th, 21st and 24th to 27th. The falls on the first three days were snow at most places, and snow was also recorded on the 9th in some districts. Fresh to strong winds were almost continuous. The condition of vegetation was normal.

In Prince Edward Island the weather was exceedingly dull and slightly colder than usual. After the 17th, temperatures exceeding 40° were general, but the nights were comparatively cold. The precipitation, which included much snow, occurred in most districts on or about the 2nd, 3rd, 6th, 10th, 14th, 15th, 20th, and from the 25th to 27th, but the falls in most instances were light, and the total quantity for the month was less than the average. Vegetation was somewhat backward.—F. F. PAYNE.

ATMOSPHERIC PRESSURE.

From Lake Superior westward to the Pacific values of the mean atmospheric pressure for April were supernormal, departures increasing inwards to Southern Saskatchewan to a maximum of $+0.10$ of an inch at Swift Current, Sask. Subnormal values were registered elsewhere in Canada with the deficiencies increasing eastward from Lake Superior reaching -0.12 of an inch at Grand Manan, N.B. and Halifax, N.S.

HIGH AREAS.

Seven areas of high pressure were charted during the month, four first appeared in the neighbourhood of the Yukon Territory; two in Northern Saskatchewan and one off Vancouver Island. The systems were for the most part energetic and unusually so for so late in the season and they were invariably accompanied by very low temperature conditions.

LOW AREAS.

Fifteen areas of low pressure were charted during the month, seven first appearing in the north-western portion of the continent; five in the western portion; one in the Gulf of Mexico off the coast of Texas and two off the United States Atlantic seaboard. A number of the areas were energetic, more so than is usually the case so late in the season, several also developed greatly as they passed off the Atlantic coast and approached Newfoundland, a continuance of the type which was so pronounced during the preceding month.

WINDS.

In British Columbia on Vancouver Island and over the mainland the direction was variable with six days with strong and nine with fresh breezes and three gales.

In Alberta and Saskatchewan the north and west directions predominated with eight days with strong and fifteen with fresh breezes and three gales.

In Manitoba the direction was chiefly northerly to westerly with eleven days with strong and five with fresh breezes and three gales.

In the Lake Region the north and west directions were the most general with twelve days with strong and eight with fresh breezes and three gales, the latter occurring on the 7th, between the 8th and 10th, and on the 16th.

In the Ottawa and Upper St. Lawrence Valleys the direction favoured the northeast and west with ten days with strong and nine with fresh breezes and two gales.

In the Lower St. Lawrence Valley and Gulf the direction was almost entirely northeasterly to northwesterly with six days with strong and eleven with fresh breezes and five gales, the latter occurring between the 5th and 6th, between the 9th and 10th, on the 14th, the 20th, and on the 24th.

In the Maritime Provinces the direction was mainly northeasterly to northwesterly with eight days with strong and ten with fresh breezes and four gales, the latter occurring on the 6th between the 9th and 10th, between the 13th and 14th, and between the 24th and 25th.

The gales were for the most part satisfactorily warned, but owing to the unusually late season navigation in several districts had hardly begun even by the close of the month.

TEMPERATURE.

The mean temperature of April was subnormal throughout Canada except in British Columbia and Alberta where locally the average was exceeded.

A negative departure of 17.2° was recorded at Chaplin, Sask., and very pronounced deficiencies were general in the Prairie Provinces and over a large portion of Ontario.

The Highest and Lowest temperatures in each Province during March, 1907, were :

British Columbia,	$79^{\circ} .5$ on 20th at Spence's Bridge — $2^{\circ} .5$ on 1st at Atlin.
Alberta,	$69^{\circ} .9$ on 21st at Lethbridge, — $7^{\circ} .0$ on 28th at Pekisko.
Saskatchewan,	$54^{\circ} .0$ on 30th at Swift Current, — $7^{\circ} .0$ on 15th at Chaplin.
Manitoba,	$60^{\circ} .0$ on 30th at Fort Osborne, — $4^{\circ} .7$ on 13th at Minnedosa.
Ontario,	$75^{\circ} .0$ on 29th at Chatham and Welland, — $30^{\circ} .0$ on 1st at White River.
Quebec,	$67^{\circ} .0$ on 29th at Brome, $0^{\circ} .0$ on 7th at Clarke City.
New Brunswick,	$67^{\circ} .0$ on 30th at Moncton, $2^{\circ} .0$ on 8th at Chatham.
Nova Scotia,	$75^{\circ} .0$ on 30th at Wolfville, $10^{\circ} .4$ on 8th at Truro.
Prince Edward Island,	$60^{\circ} .0$ on 29th at Summerside, Hamilton and Charlottetown, $9^{\circ} .0$ on 7th at Summerside.

PRECIPITATION.

The precipitation in British Columbia did not differ much from the average, being slightly in excess of it in some districts and not quite equal to it in others. In the Western Provinces, at Calgary and in the immediate neighbourhood, it was more than twice the average amount. At Swift Current, also, the normal was slightly exceeded, otherwise nearly everywhere else a deficit occurred. In Ontario it was exceeded in the Georgian Bay region but only locally in other districts, many localities recording a negative departure. In Quebec and New Brunswick it was above the average, whereas in Nova Scotia and Prince Edward Island it was very generally below the normal.

BRIGHT SUNSHINE.

The amount of bright sunshine recorded during April was supernormal in British Columbia, Southern Saskatchewan, Eastern Manitoba and in the Maritime Provinces; elsewhere in Canada sub-normal values were registered. The maximum daily amount, 97%, was recorded at Montreal, Que., on the 11th.

The extremes of departure from normal were $+23\%$ at Agassiz, B.C., and -15% at Battleford Sask.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, APRIL, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.		TEMPERATURE.					DIRECTION OF WIND FROM.								VELOCITY OF WIND.		PRECIPITATION.		No. of days with 1/10 or more.	No. of days.	No. of hours.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
				Mean reduced.	Range.	Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.				W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest days velocity.	Date and direction from.	Amount.	Difference from average.	Highest fall in month.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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Alberni	49 15 24	49 30	340			47.7	-0.3	13 78.1	20	24.9	28.8																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, APRIL, 1907.

a barometer not reduced to sea level.

Stations not furnished with Register Thermometers.

STATION.	Latitude N.	Longitude W.	Pressure.			TEMPERATURE.							DIRECTION OF WIND FROM										VELOCITY OF WIND.				Amount.	Difference from average.	Height of fall in month.	Days in 10 or more N. of average.	N. of fair days.	N. of fair days.				
			Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed.	Highest.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.							Total number of observations.	Mean miles per hour.	Highest days velocity.	Date and direction from.
NOVA SCOTIA																																				
Bridgetown	43 19	65 16	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Halifax	44 39	63 36	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
at Port	45 12	62 41	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Parsboro	45 23	61 19	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Sydney	46 10	60 10	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Sable Island, E. Point	43 58	59 46	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Sable Island, M. Station.	43 57	59 46	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
at Truro	43 57	60 46	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Windsor	44 29	61 16	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Wolfeville	45 15	61 8	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Whitehead	45 15	61 8	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Yarmouth	43 50	66	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
P. E. ISLAND																																				
Charlottetown	46 14	63 10	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Hamilton	46 25	63 48	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Summerside	46 18	63 51	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
NEWFOUNDLAND																																				
Anson Point	51 28	56 51	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Chamell	47 37	59 49	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Cape Norman	51 38	53 52	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
Point Rich.	49 42	57 55	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
St. John's	47 34	52 42	29.81	30.19	28.85	1.54	38.3	1.13	38.0	30	17.3	8.15	5	9	6	11	2	6	7	7	10	8	3	60	40	9.8	3.23	1.62	91	15	11	0	1	3		
BERMUDA																																				
Prospect	32 17	61 30	30.19	30.51	29.02	0.66	63.4	1.16	61.6	29	46.1	4.9	5	1	5	5	1	5	9	11	7	12	5	60	36	18.8W	3.32	1.62	0.56	12	17	0	1			

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING APRIL, 1907.

STATION.	RAINFALL					SNOWFALL				REMARKS.
	Amount in inches	No. of Days, '01, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Denman Island.....	5.30	5	25	2.60	8					Gales 3rd, 7th, 8th.
Goldstream Lake.....	5.16	11	16	1.52	5					
Hartley Bay.....	7.19	14	14	0.85	19	0.5	1	0.5	1	Thunder 2nd.
Nanaimo.....	2.91	4	22	1.14	9					
Naas Harbour.....	2.41	7	22	1.17	19					
Somas River.....	7.63	9	21	1.96	9					
Royal Oak.....	1.89	9	21	0.55	5					
ALBERTA—										
Bruderheim.....	0.21	3	25	0.14	18	2.5	2	1.5	2	1 below zero on 26th & 27th.
Bittern Lake.....						4.5	4	2.0	1	
Bardo.....						1.5	3	1.0	17	
Beaver Hills, W.....						3.9	1	1.5	3	
Bismark.....						0.8	1	0.8	2	
Cnutt's.....						13.0	7	3.0	7-23	
Conjuring Creek.....	R	0	26	R	8		3		9-17-25	
Clover Bar.....										
Doronde.....						1.0	3	2.0	2	
Grassy Lake.....	0.25	1	27	0.25	10	1.5	3	0.5	10-17-27	
Heather Brae.....						10.0	5	6.5	14	
Innisfail.....	0.05	1	24	0.05	21	1.0	5	3.0	16	
Islay.....						1.8	4	0.5		
Josephburg.....	0.03	1	21	0.03	23	6.0	4	2.0	17	
Jumping Pound.....	0.75	6	20	0.11	23		7			
Lacombe.....										
Magrath.....	1.00	1	26	1.00	22	7.0	3	5.0	23	Ground frozen 4 ft.
Macleod.....	0.33	1	25	0.33	23	30.0	4	18.0	25-6-27	
Mayton.....						7.0	2	7.0	16-17	
Mormville.....						3.8	3	1.0		
Okotoks.....						8.5	6	1.5	22-23	
Ponoka.....							3			
Saddle Lake.....							1		2	
Sion.....						3.2	3	2.2	17	
Stirling.....	R	—	26	R	22	9.0	3	6.0	25-6-7	
Vernilion.....						2.8	3	2.0	25	
Wabamun.....	0.02	1	23	0.02	10	4.2	6	2.8	17	
SASKATCHEWAN—										
Elm How.....						8.0	3	6.0	3	Aurora on 3, 5, 13, 15, 16, 18
Insinger.....						10.0	5	4.0	3	
Last Mountain.....						2.0	6	1.0	3	
Regina.....						8.5	11	3.0	5	
MANITOBA—										
Cartwright.....						12.8	7	4.0	3	1 on 16th.
Greta.....						12.5	6	3.0	16	
Norquay.....						15.5	01	3.0	4	
Rapid City.....	0.05	2	20	0.05	28	4.8	4	2.0	3	
ONTARIO—										
Arden.....	1.83	10	18	0.72	30	7.0	4	3.0	8	Thunder 30th.
Aurora.....	2.24	7	19	1.39	30	0.6	3	0.6	15	Thunder 29th.
Croydon.....	1.55	2	25	0.80	25	5.0	3	3.0	8	Thunder 30th.
Dutton.....	1.75	3	26	1.06	30	*	1	*	—	
Deer Park.....	1.81	7	23	0.77	30	*	1	*		
Ennismore.....	0.60	2	24	0.50	30	9.0	4	4.0	16	Thunder on 30th.
Emsdale.....	2.34	7	19	0.87	30	6.0	4	6.0	25	Aurora 5th, thunder 29th.
Goderich.....	0.92	3	26	0.60	30	1.0	1	1.0	17	
Georgetown.....	2.37	12	9	1.01	30	0.9	12	0.6	12	Aurora 5th, fog 16, thun. 29.
Huntsville.....	1.25	2	21	1.15	29	11.8	7	6.5	25	
Lansdowne.....	1.46	3	25	1.09	30	6.0	3	3.0	10	Thunder 29-30.
Midland.....	2.81	7	22	0.90	30	3.0	3	3.0	16	
Montague.....	3.40	4	22	1.50	30	4.5	3	2.0	10	
MacCue.....	2.61	3	26	1.90	30					Lake clear of ice.
Orangeville.....	2.28	2	20	1.61	30	13.2	8	3.1	13	
Princeton.....	1.80	3	25	1.09	30	0.5	1	0.5	10	Thunder 30th.
Parma.....										
Strathroy.....	2.14	6	23	0.98	30	0.5	3	0.5	8	Thunder 29th.
Sunnyside.....	1.32	6	22	0.75	30	5.5	4	5.0	8	Thunder 30th.
Sydenham.....	1.80	3	22	0.85	30	7.5	4	3.0	8	
Westport.....	2.30	5	20	1.16	29	8.5	5	3.0	10	Thunder 29, 30.
Warton.....	1.30	5	19	0.64	29	6.8	6	3.0	16	Thunder 29.
Wyoming.....	2.30	3	23	1.75	30	2.0	4	1.0	10	Thunder 28, 29.
Watford.....	2.31	6	21	0.91	30					
Westminster.....	1.81	3	18	0.73	29	*		*		Thunder 29-30.
NEW BRUNSWICK—										
Point Escomine.....	0.19	2	18	0.42	24	26.0	6	8.2	2	Auroaa 21.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF APRIL, 1907.

STATIONS.	Hours Ending															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria		0.04	0.28	0.48	0.51	0.54	0.64	0.70	0.71	0.71	0.69	0.68	0.69	0.55	0.04	
Nanaimo		0.54	0.53	0.57	0.61	0.61	0.62	0.64	0.59	0.59	0.64	0.72	0.61	0.60	0.14	
Agassiz		0.01	0.31	0.48	0.61	0.64	0.64	0.67	0.61	0.63	0.67	0.55	0.34	0.21	0.00	
Kamloops		0.05	0.39	0.52	0.57	0.65	0.74	0.67	0.65	0.64	0.69	0.60	0.45	0.26	0.02	
Savonas		0.05	0.50	0.60	0.61	0.62	0.70	0.43	0.65	0.64	0.59	0.57	0.51	0.57	0.23	
Calgary																
Edmonton		0.24	0.36	0.47	0.54	0.57	0.63	0.65	0.70	0.70	0.65	0.61	0.61	0.43	0.16	
Medicine Hat	0.03	0.21	0.47	0.55	0.63	0.63	0.59	0.64	0.63	0.56	0.47	0.34	0.24	0.08	0.00	
Battleford		0.00	0.01	0.27	0.44	0.52	0.53	0.56	0.55	0.64	0.61	0.63	0.25	0.01	0.00	
Indian Head		0.07	0.27	0.45	0.53	0.58	0.62	0.56	0.60	0.60	0.61	0.59	0.49	0.29	0.00	
Brandon		0.00	0.06	0.29	0.49	0.59	0.63	0.66	0.62	0.60	0.51	0.54	0.39	0.18	0.02	
Winnipeg		0.12	0.42	0.52	0.61	0.66	0.69	0.66	0.65	0.68	0.65	0.61	0.59	0.27	0.01	
Woodstock		0.00	0.19	0.34	0.51	0.54	0.48	0.43	0.47	0.44	0.44	0.39	0.28	0.16	0.00	
Toronto		0.00	0.19	0.48	0.52	0.51	0.53	0.56	0.53	0.50	0.49	0.44	0.33	0.19	0.00	
Lindsay		0.04	0.17	0.32	0.48	0.54	0.56	0.50	0.49	0.45	0.44	0.26	0.24	0.22	0.09	
Barrie		0.00	0.37	0.49	0.48	0.54	0.53	0.49	0.44	0.51	0.51	0.51	0.42	0.26	0.00	
Gravenhurst																
Haileybury		0.05	0.34	0.39	0.48	0.47	0.61	0.62	0.62	0.58	0.56	0.56	0.50	0.21	0.00	
Kingston		0.01	0.26	0.46	0.55	0.60	0.59	0.59	0.52	0.47	0.41	0.40	0.33	0.15	0.02	
Ottawa		0.02	0.30	0.45	0.54	0.62	0.60	0.56	0.60	0.55	0.49	0.42	0.42	0.30	0.00	
Montreal		0.02	0.22	0.36	0.38	0.46	0.51	0.50	0.55	0.53	0.50	0.51	0.32	0.03	0.00	
Sherbrooke		0.14	0.44	0.57	0.55	0.54	0.54	0.48	0.43	0.49	0.49	0.54	0.43	0.37	0.07	
Quebec		0.00	0.17	0.47	0.54	0.51	0.58	0.59	0.51	0.55	0.56	0.51	0.48	0.25	0.01	
Fredericton		0.02	0.28	0.41	0.52	0.52	0.51	0.50	0.47	0.44	0.47	0.42	0.34	0.41	0.10	
Charlottetown		0.01	0.05	0.29	0.46	0.49	0.58	0.59	0.58	0.56	0.58	0.49	0.41	0.23	0.03	

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savonas.	Calgary	Edmonton.	Medicine Hat.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month Constant sunshine being 1	0.53	0.57	0.47	0.51	0.55	—	0.53	0.44	0.36	0.45	0.42	0.51	0.35	0.39	0.36	0.40	—	0.45	0.40	0.43	0.41	0.45	0.42	0.40	0.39
Difference from average.	+ 0.13	—	+ 0.23	—	—	—	—	—	— 0.15	+ 0.07	— 0.13	+ 0.02	— 0.13	— 0.10	— 0.11	— 0.05	—	—	— 0.07	— 0.02	— 0.08	—	—	+ 0.02	—
Maximum daily amount.	0.90	0.93	0.83	0.86	0.91	—	0.94	0.93	0.71	0.87	0.84	0.90	0.86	0.83	0.96	0.88	—	0.87	0.91	0.87	0.96	0.94	0.84	0.93	0.86
Date.	21	22	23	20	10	—	23	28	27	15	24	9	20	22	20	1	—	20	27	15	11	6	7	7	7
No. of days clouded	3	3	6	1	0	—	3	6	6	1	3	3	7	6	9	5	—	4	4	5	7	5	4	10	6

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

3. Insinger.
5. Madoc, IV. Bruce Mines, IV ; Lucknow, IV ; North Bruce, Chaplin, III ; Insinger, Emsdale, Georgetown.
6. Cape Chatte, IV ; Clinton, I.
7. Paspebiac, IV ; Victoria, Alta., III ; Fort St. James.
8. Cape Chatte, IV ; Waitefield, III ; Hillsdown, IV ; Chaplin, IV.
9. Paspebiac, IV ; Treherne.
11. Waitefield, III ; Fort Vermilion, IV.
12. Fort Vermilion, IV.
13. St. Albans, IV ; Waitefield, IV ; Insinger ; Fort Vermilion, IV ; St. Peters, IV.
14. Madoc, IV ; Cockburn Island, Waitefield, III ; Red Willow, Salmon Arm.
15. St. Albans, II ; Waitefield, II ; Victoria, Alta., Insinger ; Fort Vermilion, II.
16. Insinger ; Fort Vermilion, III ; Treherne.
17. Paspebiac, IV ; St. Albans, III ; St. Peters, IV.
18. Insinger, Fort Vermilion, III.
19. Fort Vermilion, IV.
21. Point Escuminac.
22. Fort Vermilion, II.
23. Fort Vermilion, III.
25. Victoria, Alta.

Thunder recorded on :

2. Nanaimo.
10. Sable Island, E. Pt.
11. Sable Island, E. Pt.
13. Quesnel, Salmon Arm.
28. Wyoming.
29. Alton, Beatrice, Stony Creek, Birnam, Brantford, Hamilton, Port Dover, Port Burwell, Lakefield, Madoc, Peterboro, East Toronto, Port Hope, Clinton, Lucknow, Meaford, Owen Sound, Orillia, Sutton West, Aurora, Emsdale, Georgetown, Lansdowne, Strathroy, Westport, Wiarton, Wyoming, Westminster.
30. Birnam, Brantford, Peterboro, East Toronto, Sutton West, Arden, Croydon, Ennismore, Lansdowne, Princeton, Ont., Sunnyside, Westport, Westminster.

FORECASTS FOR APRIL, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1265. These were divided as follows :—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	82	65	15	2	88.4
Saskatchewan	81	55	18	11	76.2
Manitoba	88	66	13	9	82.1
Lake Superior	100	81	23	6	83.9
Lower Lake Region	125	93	26	6	84.8
Georgian Bay.	123	93	20	10	83.7
Ottawa Valley.	111	87	15	9	85.1
Upper St. Lawrence	111	86	17	8	85.1
Lower St. Lawrence.	107	78	14	15	79.1
Gulf.	107	76	11	17	77.6
Maritime Provinces, West	100	76	26	7	81.6
Maritime Provinces, East.	100	76	25	8	81.2
Total	1265	931	226	108	82.5

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto, }
28th May, 1907. }

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

MAY, 1907.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather on the lower mainland and Islands of British Columbia was quite warm during the first week, also from the 16th to 31st, the temperature occasionally reaching 80° at some places. During the intervening period it was comparatively cool. Much bright sunshine was recorded during the first, third and last weeks and the rainfall, which was light, in most localities occurred chiefly on or about the 9th, 10th, 12th, 13th, 20th and 21st. Vegetation in this portion of British Columbia was in excellent condition. On the upper mainland the weather, like that in other portions of the Province, was warmer than usual and was quite warm during the first eight days, also after the 16th. From the 27th to 31st 80° was exceeded each day at some stations and on the 30th 94° was recorded at Spence's Bridge. Exceedingly fine bright weather occurred in most districts during the first and last nine or ten days. Rain was recorded chiefly on the 9th, 10th, from 15th to 21st, and on the last day of the month. Vegetation made rapid progress after the 15th.

The weather in the Western Provinces was unusually cool, and in Saskatchewan the departure from the average in the mean temperature was exceedingly large. On or about the 15th there was a marked rise in the temperature, 70° or over being recorded at some places, but cool weather immediately followed and it was not until the 25th that any decided improvement occurred. Dull weather prevailed and the precipitation which varied considerably in amount and date of occurrence, was recorded chiefly during the second half of the month. From some northern stations snow was reported on several dates. Vegetation was backward but by the 31st it was making good progress.

In Manitoba the weather was exceedingly cold and although there was a marked improvement after the 14th low temperatures at night were general and there were several quite cool days. In most districts bright sunshine was deficient, dull weather prevailing during the first twelve days, also from the 21st to 23rd and last five or six days of the month. The precipitation which was light occurred chiefly during the first week, also on or about the 11th and 18th and included some snow. Vegetation though backward made good progress after the 19th.

In Ontario the weather was unusually cool the mean temperature being much below the average in all portions of the province. Frosts occurred almost nightly in northern districts and they were quite frequent elsewhere. On the 13th and two following days there was a marked but temporary rise in the temperature, 80° being exceeded in some places; after the 15th temperatures between 60° and 65° were only occasionally recorded. The proportion of bright sunshine somewhat exceeded the average, and during the first ten or eleven days fine weather prevailed; nevertheless there were occasional light falls of rain or snow during this period. The precipitation which was light at most stations on or about the 4th, 8th, occasionally from the 13th to 18th and 26th to 29th. Vegetation though in a healthy condition was quite backward on the 31st.

The weather in the Province of Quebec like that in the provinces to the westward was unusually cold, but in districts contiguous to the St. Lawrence and Gulf the departures in the mean temperature were less marked than elsewhere. After the 12th somewhat warmer conditions prevailed but in eastern districts frosts at night were of quite frequent occurrence. Some fine bright weather was recorded during the first ten days, also after the 22nd, the intervening period being somewhat dull in

most localities. The precipitation varied somewhat as to quantity, but in the Gaspé Peninsula it slightly exceeded the average, whilst in other districts it was deficient. The falls at most stations were reported on the 1st, 4th, occasionally from the 11th to 20th, and 27th to 29th. On the 31st vegetation was exceedingly backward.

In New Brunswick the weather was cooler than usual, the temperature at night generally being quite low and frosts occurring occasionally at most places throughout the month. The proportion of bright sunshine was well below the average at Fredericton and there was much dull weather in southern districts but in most localities elsewhere fine weather was reported almost daily from the 1st to 26th. The chief falls of rain were recorded on or about the 2nd, 4th, 11th, 14th, 16th and 30th. On the 11th a heavy snow storm was reported from some stations. Vegetation was backward on the 31st.

The weather in Nova Scotia was quite cool and the departures from the average mean temperature were much the same as in New Brunswick, frosts also occurring occasionally in more northern districts. Fine bright weather was general about the 5th to 9th and 22nd to 27th whilst the intervening periods were mostly dull. Rain was recorded on or about the 2nd, 5th, 11th, 12th, 17th, 25th, and during the last three days of the month, the total amount being below the average. Vegetation was much retarded by the cold weather.

In Prince Edward Island the weather was somewhat colder than usual but was less so than in provinces to the westward. Frosts were reported occasionally during the first half of the month but after the 15th it was slightly warmer, excepting during the last two or three days of the month when it was quite cool. Dull weather prevailed at Charlottetown, and the precipitation which included a heavy fall of snow on the 11th and 12th exceeded the average. Elsewhere the total amount was much less. The falls recorded occurred on or about the 1st, 4th, 11th, 16th, 17th, and during the last three days. Vegetation was quite backward.—F. F. PAYNE.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for May exceeded the average throughout Canada except in Northern Ontario, Eastern Quebec, and the Maritime Provinces, where subnormal values were recorded.

Departures from average were greatest over the Western Provinces, amounting generally to more than one-tenth of an inch.

The extremes of departure were 0.17 of an inch at Battleford, Sask., and 0.06 of an inch at St. John, N.B.

HIGH AREAS.

During May the majority of the areas of high barometric pressure which were charted were first observed while over the Western Provinces. Of the nine systems whose paths were traced, six passed southeastward over or north of the Lakes to the Atlantic; the others passing southeastward, west of the Lake Region, and off the Middle Atlantic Coast.

Most of the systems were quite pronounced, and cool weather was experienced in all districts during the period of their domination.

LOW AREAS.

Thirteen distinct cyclonic systems were charted during May, the place of origin, or movement into the field of observation, being divided between the Western Provinces and the extreme Southwest States, the paths followed converging as a rule towards the Gulf of St. Lawrence. Most of the areas moved either north or south of the Lake Region; only one directly crossed it. Energetic movements were frequent, and stormy weather accompanied each system along the course, but as a rule the amount of the precipitation was less than normal.

WINDS.

In British Columbia, over Vancouver Island and the Lower Mainland the southwesterly direction predominated with three gales and thirteen days of strong breezes.

Winds were largely northwesterly over Alberta and Saskatchewan with two gales in Southern Districts and four in northern, and from seven to twelve days of strong breezes.

In Manitoba the winds were from north to northwest with seven gales and fourteen days of strong breezes.

In the Lake Region, the direction was variable with a tendency towards the westerly direction. Two general gales were experienced and also 14 days of strong breezes.

The southwesterly direction was mostly in evidence in the Ottawa and Upper St. Lawrence Valleys and local gales occurred on seven occasions and strong breezes on eight days.

In the Lower St. Lawrence and Gulf the easterly direction was most in evidence and five gales were experienced together with twelve days of strong breezes.

In the Maritime Provinces, the direction was south and southwest in Western districts and north and northeast in eastern, with two gales and nine days of strong breezes.

BRIGHT SUNSHINE.

A supernormal amount of Bright Sunshine was recorded in British Columbia and Ontario during May, but elsewhere in Canada the normal value was not reached. The extremes of departure from average were +19% at Victoria, B.C. and -24% at Battleford, Sask.

The maximum daily amount recorded in Canada was 95% of the possible at Calgary, Alta. on the 1st.

TEMPERATURE.

The mean temperature for May was below the average throughout Canada, except in British Columbia and the Yukon Territory, where small positive differences were recorded. The negative departures from average were especially large from Saskatchewan to New Ontario, ranging between 10° in the former Province, and 13° in the latter District. In Quebec, differences were from 2° to 7° and in the Maritime Provinces from 3° to 4°. An excess of from 2° to 4° occurred in British Columbia, and of 5° in the Yukon Territory.

The Highest and Lowest temperatures in each Province during May, 1907, were :

British Columbia,	94° ·0 on 30th at Spence's Bridge,	20° ·0 on 1st at Big Creek.
Alberta,	79° ·7 on 15th at Lethbridge,	3° ·0 on 1st at Pakan.
Saskatchewan,	76° ·0 on 27th at Battleford,	2° ·5 on 6th at Prince Albert.
Manitoba,	79° ·5 on 31st at St. Albans,	4° ·0 on 6th at Carberry.
Ontario,	88° ·0 on 14th at Stoney Creek,	0° ·0 on 4th at White River.
Quebec,	77° ·2 on 15th at St. Ann de Bellevue,	8° ·0 on 1st at Abitibi.
New Brunswick,	76° ·5 on 18th at St. Stephen,	25° ·0 on 5th at St. Stephen.
Nova Scotia,	74° ·0 on 17th at Port Hastings,	23° ·5 on 15th at Truro.
P. E. Island.	70° ·0 on 20th at Hamilton,	27° ·0 on 11th at Summerside.

PRECIPITATION.

There was an almost general deficiency in precipitation over the Dominion, the widest departures from average occurring in British Columbia, where in most districts the rainfall was less than one inch. In the Western Provinces the aggregate of rain and melted snow was very generally less than half the average, but some few stations in northern Alberta and north-eastern Saskatchewan recorded an average amount. In Ontario it was only in Algoma and Nipissing and the Niagara Peninsula that a normal amount was recorded, other parts of the province, and also western Quebec showing a deficiency of between 30 and 40 per cent. In Eastern Quebec and the northern portions of the Maritime Provinces, including Prince Edward Island, it was slightly in excess, while other districts showed a small deficiency.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MAY, 1907.

a Barometer not reduced to Sea Level.

* Stations not furnished with Registering Thermometers.

STATION.	Latitude N.		Longitude W.		PRESSURE.			TEMPERATURE.					DIRECTION OF WIND FROM										VELOCITY OF WIND.			PRECIPITATION			No. of days with 1/10 of inch or more.	No. of fair days.	No. of the month.	No. of the year.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
	in.	in.	in.	in.	Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.					Total number of observations.	Mean miles per hour.	Highest daily velocity.	Date and direction.	Amount.	Difference from average.	Highest fall in month.	Days with 1/10 of inch or more.	No. of the month.	No. of the year.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, MAY, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	PRESSURE.			TEMPERATURE.				DIRECTION OF WIND FROM								VELOCITY OF WIND.			PRECIPITATION.			No. of days completely cloud.	No. of days with all or more.	No. of thunder storms.	No. of fair days.	No. of hurricanes.	No. of fog.					
			Elevation above sea level, in feet.	Mean reduced.		Range.	Mean.	Difference from average.	Years observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean amount of humidity.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean per hour.	Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	Highest fall in month.	Days with all or more.	
				in.	in.	in.	in.	in.																										
MANITOBA - Con.																																		
Oakbank.	49 57	96 42	710				38.5	10.0	12 73	31	9	32.0	32.5	32.5	32.5	32.5	9	5	0	4	1	3	2	9	1	31		0.57	0.59	0.57	25	0	2	0
Oakdale Park.	49 11	100 18					44.4	3.7	11 0	31	10.0	38.2	38.2	38.2	38.2	38.2	10	5	0	30	1	3	2	9	1	31		0.30	0.30	0.30	125	0	0	0
Pinestone.	49 31	100 38					43.1	3.7	11 0	31	10.0	38.2	38.2	38.2	38.2	38.2	10	5	0	30	1	3	2	9	1	31		0.16	0.16	0.16	125	0	0	0
Portage la Prairie.	49 37	98 17	820				38.7	12.9	20 70	16	12.0	6.1	6.1	6.1	6.1	6.1	12	11	2	3	5	7	2	19	2	57		0.20	1.84	0.08	1	57	0	0
Pierson.	49 11	101 15	1531				41.6	9.9	21 79.5	31	12.0	7.27	7.27	7.27	7.27	7.27	12	11	2	3	5	7	2	19	2	57		0.13	0.90	0.10	9	27	1	0
St. Albans (Awenel).	49 12	99 33	1180				38.4	13.0	27 67.0	26	11.0	12.5	12.5	12.5	12.5	12.5	12	11	2	3	5	7	2	19	2	57		1.25	0.40	0.40	3	25	0	0
Stony Mountain.	50 1	97 11	893				36.1	16.8	11 65.0	31	10.0	7.25	7.25	7.25	7.25	7.25	12	11	2	3	5	7	2	19	2	57		0.37	1.35	0.36	10	17	0	1
Treherne.	49 26	98 00	1212				36.1	16.8	11 65.0	31	10.0	7.25	7.25	7.25	7.25	7.25	12	11	2	3	5	7	2	19	2	57		0.37	1.35	0.36	10	17	0	1
Virden.	49 31	100 55	1111				36.1	16.8	11 65.0	31	10.0	7.25	7.25	7.25	7.25	7.25	12	11	2	3	5	7	2	19	2	57		0.37	1.35	0.36	10	17	0	1
Winnipeg.	49 53	97 7	759				36.7	12.5	31 71.3	31	10.9	22.1	22.1	22.1	22.1	22.1	12	11	2	3	5	7	2	19	2	57		0.37	1.35	0.36	10	17	0	1
ONTARIO -																																		
Copper Cliff.	46 30	80 59					42.5	1.25	0	15	22.0	11.2	11.2	11.2	11.2	11.2	15	13	1	2	1	2	9	18	8	62		2.97	0.77	12	19	1	0	
Kenora.	49 18	94 32	1102				35.3	5.6	8 0	31	10.0	7.13	7.13	7.13	7.13	7.13	15	13	1	2	1	2	9	18	8	62		0.40	0.10	0.10	8	20	0	0
Port Arthur.	48 55	90 18	1346				35.3	5.6	8 0	31	10.0	7.13	7.13	7.13	7.13	7.13	15	13	1	2	1	2	9	18	8	62		0.40	0.10	0.10	8	20	0	0
Savanne.	48 35	85 16	1252				34.3	12.1	18 61.5	31	0.0	1.25	1.25	1.25	1.25	1.25	15	13	1	2	1	2	9	18	8	62		3.11	1.30	1.30	15	16	0	0
White River.	48 35	85 16	1252				34.3	12.1	18 61.5	31	0.0	1.25	1.25	1.25	1.25	1.25	15	13	1	2	1	2	9	18	8	62		3.11	1.30	1.30	15	16	0	0
Alton.	43 51	80 5	1250				46.0	1.82	7	11	23.0	12.2	12.2	12.2	12.2	12.2	11	9	1	3	1	3	8	4	11	62		1.31	0.41	0.41	0	20	0	3
Bala.	45 0	79 30	755				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Beaumont.	45 0	79 30	755				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Bruce Mines.	46 18	83 53	365				46.0	1.82	7	11	23.0	12.2	12.2	12.2	12.2	12.2	11	9	1	3	1	3	8	4	11	62		2.95	0.71	11.2	1	1	1	1
Clinton.	43 52	81 37	380				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Collingwood.	44 30	80 15	640				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Coldwater.	44 38	80 15	640				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Cook's Bay.	45 57	83 18	610				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Gravenhurst.	44 51	83 29	770				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Huntsville.	45 19	79 38	687				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Halleybury.	45 29	79 38	687				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Eastview.	43 41	80 38	1262				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Lacknow.	43 36	81 30	1262				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Lake Palom (Calvin).	46 15	78 48	940				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Meaford.	44 37	80 35	607				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
North Bruce.	44 31	80 35	607				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Orillia.	44 31	80 35	607				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Parry Sound.	45 19	80 0	1355				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Point Clark.	45 5	81 21	636				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Southampton.	44 30	81 21	636				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Sutton West.	44 19	79 15	940				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Cleland.	43 18	79 25	940				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Burnham.	43 12	80 33	940				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Burnford.	43 12	80 33	940				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	12.5	11	9	0	10	9	6	3	25	26	93		1.75	1.53	0.97	6	21	1	1
Cottam.	42 23	82 12	365				44.0	7.6	28 4.0	11	15.0	12.5	12.5	12.5	12.5	1																		

ONTARIO—Continued.

Stratford.....	43	23	81	0	1191	48.7	—	6.0	40.78	0	13	25.0	11	20.4	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	4.43	+1.55	1.26	7.23	0	0	0			
Stony Creek.....	43	13	79	45	252	48.4	—	6.5	22.88	0	11	26.0	12	24.4	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.30	+0.15	0.87	8.23	0	1	1			
Woodstock.....	43	8	80	47	980	50.2	—	4.8	21.81	0	14	27.0	11	23.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.25	+0.35	1.02	11.20	0	0	0			
Welland.....	42	20	79	17	577	50.3	—	9.1	32.80	0	15	30.0	14	28.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.69	—	0.22	1.06	8.23	0	0	0		
Windsor.....	42	20	83	4	625	50.6	—	2.81	0	14	28.0	14	28.0	11	23.1	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.69	—	0.22	1.06	8.23	0	0	0	
Wallaceburg.....	42	35	24	380	46.7	—	8.0	12.79	0	14	28.0	14	28.0	12	22.5	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.12	—	1.41	1.01	4.27	0	1	2	
Agincourt.....	43	47	79	16	380	46.1	—	9.75	0	16	28.0	16	28.0	12	22.5	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	0.80	—	0.27	0.00	4.27	0	0	0	
Bloomfield.....	43	59	77	21	280	45.6	—	1.75	0	18	25.0	18	25.0	12	18.2	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.11	—	0.68	7.21	0	1	1		
East Toronto.....	44	13	76	29	285	46.3	—	7.0	33.67	0	33	27.6	12	16.1	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.71	—	0.88	0.58	9.20	1	0	0		
Kingston.....	43	10	79	24	285	44.5	—	3.65	0	14	30	32.0	11	15.4	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.11	—	1.43	0.63	3.28	0	1	0		
Lakeside Home.....	43	56	78	20	350	46.6	—	7.8	11.73	0	18	28.0	11	19.8	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.93	—	0.76	1.02	9.20	3	1	0		
Port Hope.....	43	40	79	24	350	48.3	—	5.2	66.76	3	18	26.0	12	20.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	0.93	—	2.11	0.60	2.26	0	0	0		
Toronto.....	43	40	79	24	350	48.3	—	5.2	66.76	3	18	26.0	12	20.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	0.93	—	2.11	0.60	2.26	0	0	0		
Bancroft.....	45	1	77	50	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Clinton.....	45	23	77	9	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Haliburton.....	45	1	78	28	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Kilmourne.....	45	1	78	28	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Lindsay.....	45	1	78	28	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Lakeside.....	45	1	78	28	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
Madoc.....	45	1	78	28	160	45.3	—	8.1	19.57	0	13	15.8	4	26.9	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.18	—	0.27	2.50	1.35	0	0	0		
North Gower.....	45	8	75	43	302	47.7	—	3.79	0	16	20.0	16	20.0	12	12.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.45	—	0.65	3.22	0	0	0		
Ottawa.....	45	8	75	43	302	47.7	—	3.79	0	16	20.0	16	20.0	12	12.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.45	—	0.65	3.22	0	0	0		
Donnaco.....	45	26	73	42	291	48.9	—	6.2	12.77	0	15	21.0	15	21.0	12	12.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.43	—	1.12	0.60	12.10	0	0	1
Peterboro.....	44	20	78	18	672	48.9	—	7.9	12.77	0	15	21.0	15	21.0	12	12.0	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.12	—	0.56	0.80	6.22	0	1	0
Rockville.....	44	17	78	19	722	43.7	—	8.5	38.79	0	15	11.0	12.34	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.73	—	0.11	0.28	11.17	0	0	0			
Kennewick.....	46	9	78	6	557	43.7	—	8.7	30.76	0	15	11.0	12.34	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.73	—	0.11	0.28	11.17	0	0	0			
Uxbridge.....	45	26	78	39	886	46.2	—	9.0	26.83	5	16	18.0	5.23	1	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	0.90	—	1.38	0.50	0.19	0	0	0		
Ursa.....	41	5	78	8	886	46.2	—	9.0	26.83	5	16	18.0	5.23	1	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	0.90	—	1.38	0.50	0.19	0	0	0		
Quebec.....	48	13	79	22	292	35.8	—	11.5	11.69	0	31	8.0	1.07	7	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.75	—	0.81	0.70	6.21	0	2	4			
Abitibi.....	49	6	61	12	12	32.2	—	2.5	21.53	0	27	28.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.17	—	0.13	0.83	4.27	0	0	0		
Anticosti, E. Point.....	49	6	61	12	12	32.2	—	2.5	21.53	0	27	28.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.17	—	0.13	0.83	4.27	0	0	0		
Anticosti, W. Point.....	49	6	61	12	12	32.2	—	2.5	21.53	0	27	28.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.17	—	0.13	0.83	4.27	0	0	0		
Anticosti, S. W. Point.....	49	6	61	12	12	32.2	—	2.5	21.53	0	27	28.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.17	—	0.13	0.83	4.27	0	0	0		
Brome.....	45	0	63	36	30	45.4	—	8.0	28.77	0	15	22.0	25.19	6	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.80	—	1.48	0.64	9.17	0	1	0			
Bird Rocks.....	45	0	63	36	30	45.4	—	8.0	28.77	0	15	22.0	25.19	6	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.80	—	1.48	0.64	9.17	0	1	0			
Biquet City.....	45	0	63	36	30	45.4	—	8.0	28.77	0	15	22.0	25.19	6	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.80	—	1.48	0.64	9.17	0	1	0			
Cape Chertif.....	49	6	63	45	150	40.7	—	3.1	25.31	0	18	25.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.27	—	0.00	0.90	6.25	0	0	0		
Cape Magdalen.....	49	6	63	45	150	40.7	—	3.1	25.31	0	18	25.0	2	—	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	2.27	—	0.00	0.90	6.25	0	0	0		
Chicoutimi.....	48	25	71	5	150	42.6	—	3.3	25.07	2	22	30.0	3	21.1	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.57	—	0.02	0.53	10.31	0	0	1		
Father Point.....	48	31	68	19	20	42.2	—	6.2	30.50	8	18	22.0	2	13.4	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	1.37	—	1.17	0.11	9.22	0	2	0		
Montreal.....	45	30	73	35	187	48.2	—	6.1	33.71	0	18	28.1	2	16.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.03	—	0.32	0.80	11.20	0	0	0		
Paspé.....	48	31	68	19	20	42.2	—	6.1	33.71	0	18	28.1	2	16.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.03	—	0.32	0.80	11.20	0	0	0		
Perce.....	48	31	68	19	20	42.2	—	6.1	33.71	0	18	28.1	2	16.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.03	—	0.32	0.80	11.20	0	0	0		
Quebec.....	48	31	68	19	20	42.2	—	6.1	33.71	0	18	28.1	2	16.6	3	0	11	22	14	12	2	20	11	8	0	93	17	IX	27 W	3.03	—	0.32	0.						

* Stations not furnished with Registered Thermometers.

Barometer not reduced to Sea Level.

[illegible]

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING MAY, 1907.

STATION.	RAINFALL					SNOWFALL					REMARKS.
	Amount in inches	No. of Days, 90, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days	Heaviest Fall in Month	Date.		
BRITISH COLUMBIA—											
Coquitlam.....	2.03	4	27	1.21	10						
Denman Island.....	4.77	6	25	1.12	8						
Goldstream Lake.....	0.87	5	26	0.57	10						
Hartley Bay.....											
Naas Harbour.....											
Nanaimo.....	1.51	3	26	0.34	19						
Sonias River.....	3.24	5	26	1.47	10						
Royal Oak.....	0.52	3	27	0.43	19						
Swansow Bay.....	1.12	9	22	0.80	14						
ALBERTA—											
Bardo.....	0.31	1	27	0.30	20	6.5	3	5.0	11		
Beaver Hills, W.....	0.83	8	20	0.21	8	6.6	5	2.5	11 21	Thunder 28th.	
Bismark.....	0.61	3	26	0.32	20	2.2	4	1.2	9		
Bruderheim.....	0.86	5	23	0.13	20	17.0	3	11.0	11		
Bittern Lake.....	0.90	6	22	0.41	21	5.0	1	2.3	11		
Coutts.....	3.75	6	24	1.00	21-29	1	1	1.0	1		
Clover Bar.....	0.60	3	26	0.50	21	1.5	2	1.0	11		
Conjuring Creek.....	0.75	1	27	0.75	21	5.0	2	5.0	9-11		
Dorence.....	0.61	4	25	0.33	21	6.5	3	1.0	21		
Grassy Lake.....	1.00	3	28	0.50	31						
Heather Brae.....	1.16	9	21	0.27	8	6.8	4	3.0	11	Thunder 28th.	
Islay.....	0.65	2	28	0.40	22	0.5	1	0.5	7		
Innisfail.....	3.14	6	25	1.80	8	2.0	1	2.0	8		
Josephburg.....	1.84	5	26	1.15	20						
Jumping Pound.....	0.97	8	16	0.34	21					Thunder 28th.	
Lacombe.....	0.34	2	27	0.33	31	1.5	2	1.0	8		
Macleod.....	1.17	6	25	0.47	17		1	*			
Magrath.....	1.04	3	27	0.58	16	6.0	1	6.0	2		
Mayton.....	0.87	6	22	0.44	21	1.0	1	1.0	9		
Morinville.....	0.78	5	23	0.25	21	7.5	3	4.7	11		
Okotoks.....	0.84	6	25	0.35	21					Thunder 28th, 29th.	
Ponoka.....	1.17	6	24	0.77	21	2.0	1	2.0	10		
Sion.....	1.13	6	21	0.42	21	5.2	3	2.2	10		
Stirling.....											
Saddle Lake.....	0.15	2	17	0.10	17	*	2	*			
Vermilion.....	R	2	26	R		2.8	2	1.8	12		
Wabamun.....	1.65	8	20	0.47	21	5.2	2	4.5	9		
SASKATCHEWAN—											
Elm How.....	0.73	6	23	0.19	31	2.0	2	2.0	8		
Insinger.....	1.18	3	22	0.50	21	1.0	5	1.0	11	Aurora 14th, 19th, 22nd, thunder 28th.	
Last Mountain.....	0.68	3	23	0.29	28	*	3	*	—	Thunder 28th.	
Regina.....	0.67	4	19	0.26	28	2.0	5	1.0	10	Thunder 28th,	
Hanley.....	0.40	3	28	0.20	27						
MANITOBA—											
Cartwright.....	2.24	6	22	0.80	4	1.5	4	1.0	1	Aurora 14th, thunder 29th.	
Gretna.....	0.48	2	26	0.35	29						
Norquay.....	0.09	2	21	0.08	28	7.5	7	3.0	5		
Rapid City.....	0.26	7	23	0.20	29	2.4	3	1.3	11		
Beaver.....	1.00	2	29	0.70	29	*	3	*	—		
Rosebank.....	1.05	2	29	0.95	29						
ONTARIO—											
Aurora.....	1.33	4	23	0.85	15	3.5	3	3.2	1		
Arden.....	1.63	5	23	0.83	1	7.0	2	4.0	5		
Croydon.....	1.35	3	28	0.60	4	4.0	1	4.0	4		
Deer Park.....	1.05	5	24	0.62	26	1.6	2	1.2	4		
Dutton.....	2.43	4	21	1.04	26						
Emsdale.....	1.76	13	14	0.33	28	3.0	6	3.0	28	Thunder 13th, 14th.	
Goderich.....	0.75	4	26	0.10	26	2.0	1	2.0	28		
Georgetown.....	1.73	10	21	0.80	26	1.0	3	1.0	4	Aurora 13th, thunder on 13th, 26th.	
Huntsville.....	1.66	5	25	0.68	15	1.0	2	0.8	28	Thunder on 13th.	
Lansdowne.....	1.26	5	12	0.18	4						
MacCue.....	0.83	3	27	0.33	26			*	—		
Midland.....	0.88	5	19	0.43	15		2	*	—		
Montague.....	1.77	4	27	0.19	26	2.0	2	2.0	4		
Orangeville.....	2.37	4	25	1.29	16	5.3	2	3.3	4		
Parma.....											
Princeton.....	4.76	8	21	1.94	27	*	3	*	—		
Sydenham.....	2.05	4	27	1.00	4	*		*	—		
Strathroy.....	2.80	8	23	1.15	25		2		—	Thunder 18th, 27th.	
Wyoming.....											
Watford.....	2.15	6	26	0.87	27						
Westport.....	0.61	3	23	0.38	25	3.5	4	3.5	4	Thunder 18th, 19th.	
Wooler.....	1.03	3	23	0.52	15	3.0	2	3.0	4		
Westminster.....	1.92	5	25	0.53	15	*	3	*	—		
Warton.....	0.78	4	26	0.30	28	1.3	3	1.3	27	Thunder 26th,	
Ennisnore.....	1.00	3	27	0.45	26	4.0	3	4.0	4	Thunder 15th, 18th.	
NEW BRUNSWICK—											
Point Escuminac.....	0.77	4	24	0.63	30	1.1	1	1.1	11	Fog, 17th 19th.	

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF MAY, 1907.

STATIONS.	HOURS ENDING															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria		0.05	0.27	0.47	0.63	0.72	0.75	0.82	0.86	0.85	0.82	0.76	0.63	0.57	0.43	
Nanaimo	0.05	0.23	0.52	0.58	0.59	0.61	0.64	0.68	0.67	0.67	0.63	0.60	0.60	0.57	0.36	
Agassiz		0.01	0.21	0.52	0.62	0.64	0.64	0.65	0.63	0.64	0.66	0.59	0.49	0.49	0.03	
Kamloops		0.25	0.45	0.59	0.67	0.66	0.69	0.66	0.61	0.54	0.57	0.58	0.52	0.45	0.26	0.01
Savonas		0.11	0.38	0.54	0.59	0.66	0.69	0.66	0.58	0.58	0.55	0.61	0.51	0.37	0.23	
Calgary	0.02	0.19	0.40	0.45	0.49	0.50	0.56	0.57	0.57	0.47	0.47	0.41	0.42	0.34	0.10	
Medicine Hat	0.15	0.27	0.35	0.39	0.52	0.57	0.56	0.59	0.66	0.58	0.55	0.52	0.52	0.44	0.05	
Edmonton	0.07	0.38	0.43	0.49	0.50	0.50	0.48	0.46	0.52	0.47	0.49	0.47	0.47	0.36	0.20	
Battleford		0.02	0.20	0.31	0.52	0.32	0.34	0.32	0.33	0.30	0.35	0.28	0.26	0.20	0.03	
Indian Head		0.07	0.34	0.45	0.57	0.58	0.51	0.54	0.50	0.51	0.48	0.42	0.52	0.49	0.40	
Brandon		0.00	0.28	0.45	0.60	0.60	0.70	0.66	0.65	0.67	0.58	0.47	0.47	0.42	0.45	
Winnipeg		0.19	0.43	0.51	0.63	0.60	0.66	0.64	0.64	0.63	0.68	0.62	0.51	0.35	0.60	
Woodstock		0.09	0.43	0.54	0.56	0.57	0.60	0.60	0.57	0.61	0.60	0.59	0.52	0.44	0.08	
Toronto		0.03	0.43	0.56	0.61	0.58	0.58	0.67	0.68	0.68	0.67	0.67	0.61	0.45	0.00	
Lindsay	0.01	0.22	0.32	0.52	0.64	0.56	0.62	0.59	0.56	0.56	0.63	0.6	0.56	0.51	0.43	0.11
Barrie		0.20	0.52	0.60	0.60	0.65	0.63	0.66	0.69	0.63	0.64	0.66	0.63	0.52	0.08	
Gravenhurst																
Haileybury	0.03	0.27	0.43	0.38	0.39	0.41	0.48	0.51	0.51	0.53	0.54	0.45	0.43	0.46	0.40	0.03
Kingston		0.24	0.56	0.64	0.62	0.62	0.67	0.69	0.61	0.59	0.51	0.54	0.51	0.48	0.14	
Ottawa		0.06	0.35	0.49	0.54	0.61	0.63	0.66	0.65	0.58	0.59	0.50	0.49	0.42	0.07	
Montreal		0.04	0.25	0.38	0.48	0.48	0.47	0.39	0.41	0.32	0.34	0.31	0.25	0.46	0.00	
Sherbrooke		0.11	0.31	0.42	0.43	0.51	0.56	0.46	0.49	0.42	0.50	0.49	0.40	0.32	0.13	
Quebec		0.08	0.30	0.40	0.45	0.47	0.41	0.47	0.50	0.52	0.47	0.44	0.42	0.37	0.47	
Fredericton		0.14	0.34	0.44	0.48	0.43	0.40	0.35	0.45	0.45	0.46	0.40	0.35	0.26	0.14	
Charlottetown		0.17	0.39	0.43	0.50	0.52	0.55	0.49	0.56	0.44	0.49	0.40	0.31	0.28	0.11	

	Victoria.	Nanimo.	Agassiz	Kamloops.	Savonas.	Calgary	Medicine Hat.	Edmonton.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.		
Mean proportion for month <i>Constant sunshine being 1</i>	0.55	0.52	0.43	0.48	0.46	0.39	0.40	0.40	0.23	0.10	0.41	0.47	0.46	0.49	0.50	0.52		0.41	0.50	0.45	0.33	0.35	0.36	0.31	0.38		
Difference from average.	+	0.49	—	+					—	0.24	—	0.08	—	0.01	—	0.03	—	0.06		+	0.02	+	0.06	0.18		+	0.10
Maximum daily amount.	0.84	0.88	0.74	0.90	0.88	0.95	0.90	0.90	0.76	0.80	0.81	0.85	0.89	0.82	0.97	0.87		0.90	0.91	0.87	0.92	0.89	0.85	0.79	0.87		
Date.	6&30	30	12	1	6	1	2	2	19	6	13	11	30	1	20	11		29	1	1	25	25	25	18	26		
No. of days completely clouded	3	6	5	1	2	9	3	7	13	5	0	2	6	2	1	1		1	3	1	1	4	4	5	6	5	

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Waitefield, IV.
2. St. Albans, II : Waitefield, III ; Pakan, III ; Hillsdown, IV ; Gray Hill, IV ; Haileybury, III ; Quebec, III.
3. St. Albans, III ; Waitefield, IV ; Haileybury, IV.
4. Waitefield, IV.
5. Halifax, IV.
12. Lucknow, IV : Waitefield, III ; Pasbebiac, Grand Manan, IV ; Vancouver, III.
13. Georgetown, IV ; St. Albans, IV ; Clinton, Pakan, III ; Toronto, IV.
14. Cartwright, IV ; Waitefield, I ; Hillsdown, IV ; Gray Hill, III ; Insinger, IV ; Halifax, IV.
15. Waitefield, III ; Blackfalds, Edmonton, IV ; Minnedosa, I.
16. St. Albans, IV ; Waitefield, IV.
18. Copper Cliff, Lake Talon, Lucknow, IV ; Waitefield, IV ; Toronto, IV ; Haileybury, III.
19. Waitefield, IV ; Estevan, Insinger, IV ; Birnam, IV ; Toronto, IV.
20. Channell, Nfld.
22. Insinger, III.
25. Grand Manan, IV.
26. Kingston.
28. Lake Talon, Beatrice.
30. Waitefield, IV.

Thunder recorded on :

4. Oakbank.
5. Ladner, Princeton, Chilliwack, Vancouver.
6. Vancouver.
7. Hillsdown, Gray Hill, Blackfalds.
9. Barrie, Chicoutimi.
10. Vancouver.
11. Edmonton, Yarmouth.
12. Bruce Mines.
13. Emsdale, Georgetown, Lansdowne, Lake Talon, Bruce Mines, Cockburn Island, Beatrice.
14. Emsdale, Lake Talon, Uplands, Bruce Mines, Sutton West, Cockburn Island, Brome, Haileybury, Parry Sound, Montreal.
15. Ennismore, Barrie, Gravenhurst.
16. Sutton West, Medicine Hat.
17. Birnam.
18. Strathroy, Westport, Ennismore, Lake Talon, Brantford, Paris, Birnam, Madoc, Peterboro' Chicoutimi, Port Stanley, Lindsay, Haileybury, London, Quebec.
19. Westport, Edmonton, Chilliwack.
20. Estevan.
21. Naas Harbour.
22. Alberni, Rivers Inlet.
23. Big Creek.
24. Big Creek.
26. Georgetown, Wiarton, Owen Sound, Meaford, Clinton, Lake Talon, Lucknow, Cockburn, Island, Barrie, North Bruce, Brantford, Hamilton, Princeton, Paris, Stoney Creek, Birnam, Port Dover, Port Burwell, Agincourt, East Toronto, Madoc, Port Stanley, Toronto, Charlottetown, Lindsay, London.
27. Strathroy, Sutton West, Birnam.
28. Waitefield, Red Willow, High River, Okotoks, Heather Brae, Gatesgarth, Beaver Hills W., Moose Jaw, Insinger, Last Mountain, Regina, Edmonton, Swift Current, Jumping Pond.
29. Cartwright, Almassippi, Oakbank, Red Willow, Gray Hill, Okotoks, Waitefield, Qu'Appelle, Winnipeg.
30. Gray Hill, Gatesgarth, Calgary, Swift Current.
31. Kenora, Big Creek, Swift Current.

FORECASTS FOR MAY, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1325. These were divided as follows :—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	81	72	5	7	88.7
Saskatchewan	80	67	10	3	90.0
Manitoba	86	71	7	8	86.6
Lake Superior	123	95	20	8	85.4
Lower Lake Region	128	100	21	7	86.3
Georgian Bay	126	98	19	9	85.3
Ottawa Valley.	110	89	16	5	88.2
Upper St. Lawrence	100	80	16	5	89.0
Lower St. Lawrence	121	98	19	4	88.8
Gulf.	120	95	20	5	87.5
Maritime Provinces, West	119	91	18	7	86.5
Maritime Provinces, East.	119	88	21	7	81.0
Total.	1325	1096	195	71	87.0

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

Meteorological Office, Toronto,

2nd July, 1907.

R. F. STUPART,
Director.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

JUNE, 1907.

No. 6.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER

The weather over the lower mainland and islands of British Columbia did not depart much from the normal, but it was somewhat drier than usual in most districts. Much fine weather was recorded during the first five or six days, also after the 16th the rain recorded occurring chiefly between the 5th and 17th. The temperature was exceedingly variable, and at Alberni a daily range of between 40° and 50° was occasionally recorded after the 19th. Vegetation was in excellent condition on the 30th. Over the upper mainland the weather was quite similar to that in districts to the westward, the only marked departure being in the rainfall which was light in most localities. From the 5th to 9th rain occurred frequently and there were also falls about the 15th and 23rd to 30th. In this portion of the province vegetation was considerably retarded by the dry weather.

In the Western Provinces the only marked departure from the average noticeable was in the rainfall which, though varying somewhat with the district, was below the average at most places. The falls recorded, though light, were quite frequent and were well distributed through the month. Cloud and sunshine followed in quick succession, but dull weather preponderated. Owing to the unusually favourable weather prevailing, vegetation made splendid progress and by the 30th its condition was not much below the average.

The weather in Manitoba was slightly cooler than usual, but at many places the mean temperature was normal and the greatest departures were less than 2° below the average. The proportion of bright sunshine was considerably below the average and rain was frequent, the chief falls occurring about the 4th, 10th to 12th, 16th, 20th to 24th and 29th. Vegetation was backward on the 30th, but it made excellent progress during the month.

The weather in Ontario was somewhat cooler than usual, excepting in northern districts where on the contrary the mean temperature at many places slightly exceeded the average. A marked rise in the temperature occurred after the 12th, 80° being frequently exceeded and 90° being occasionally recorded at some places. Much fine weather was reported between the 6th and 18th, also after the 26th, but the proportion of bright sunshine was below the average. Rain was recorded generally about the 4th to 6th, 18th, 19th, 22nd, 26th and 30th, the aggregate amount being below the average at most stations but above at some places. The condition of vegetation on the 30th was normal.

In the Province of Quebec the weather was a little cooler than usual in most districts, but in the vicinity of Montreal and at some northern stations the mean temperature on the contrary was slightly above the average. After the 12th much warmer weather prevailed, but at many places several rapid changes in the temperature characterised the weather of the latter half of the month. Much fine weather was recorded during the first four days, also from the 10th to 18th the chief rainy periods occurring about the 5th to 9th, 19th to 27th and 30th. Northeasterly winds prevailed and on the 30th vegetation was backward.

The weather in New Brunswick was somewhat cool but after the 11th, although there were occasional relapses, there was a marked rise in the temperature, 80° being exceeded upon several days. Exceedingly dull weather generally prevailed, but from the 1st to 5th and 12th to 19th much bright sunshine was recorded. Rain, which in the aggregate was light, was recorded chiefly about the 6th, 9th, 16th, 21st, 25th and 27th. Light frosts were noted during the first half of the month, but little damage was caused thereby. Vegetation was backward.

In Nova Scotia the weather was quite cool more especially up to the 12th when temperatures at night between 35° and 45° were frequently recorded. After the date mentioned warmer weather was general. Throughout the month there was much cloudiness and there were few bright days, nevertheless the rain which was recorded chiefly about the 7th to 10th, 16th, 20th, 25th, 27th and 30th was light in the aggregate. Vegetation throughout the Province was backward.

The weather in Prince Edward Island was characterised by frequent cold easterly winds up to the 17th and the mean temperature of the month was below the average. After the 17th it was generally much warmer, but low temperatures at night were frequent. Dull weather prevailed, but the rain which was recorded about the 7th, 21st, 22nd and 27th was below the average quantity for the month. Light ground frosts were reported but they appear to have done little damage, and on the 30th the condition of vegetation was normal. —F. F. PAYNE.

ATMOSPHERIC PRESSURE.

A subnormal value of the mean atmospheric pressure for June was recorded throughout Canada, except over Northern Ontario, Quebec, and the Maritime Provinces, where the normal was exceeded. A range of departure from average of 0.18 of an inch occurred, the extremes being —0.08 of an inch at Edmonton, Alta., and Battleford, Sask., and +0.10 of an inch at Father Point, Que.

HIGH AREAS.

The anti-cyclonic systems of June were, for the most part, of feeble intensity, and as a rule exhibited a tendency to disperse as they passed eastward.

Six areas were charted during the month, three of which were first observed over the far Northwest, and pursued a southeasterly course to the Middle Atlantic Coast. Two systems came into the field of observation from the Hudson's Bay Region, and one from the Middle Pacific Coast. The centres of all the systems ultimately passed eastward to the Atlantic.

LOW AREAS.

Eight areas of low barometric pressure were charted during June, the majority being of feeble energy, and assuming an erratic course. The systems exhibited a tendency to hover while over the western portion of the continent.

The areas were first observed over the North West Territories and South West States, and, as a rule, followed a converging, irregular course to the Gulf of St. Lawrence. The accompanying precipitation was generally light, and few areas gave stormy conditions.

WINDS.

In British Columbia, light southerly and southwesterly winds predominated during June.

In Alberta, the northwesterly direction was most in evidence with three days of strong breezes, eight of fresh, and local gales on one occasion.

The northwesterly direction also prevailed over Northwestern Saskatchewan, elsewhere in the Province the direction was more variable. Gales were recorded on several occasions and strong breezes were also frequent.

In Manitoba the direction of the wind was variable, and strong breezes were of frequent occurrence; also gales were recorded on from five to eight days.

In the Lake Region the direction of the wind was largely variable, and fresh to strong breezes were of frequent occurrence, also local gales were recorded on three days.

Strong southwesterly winds prevailed throughout the Ottawa and Upper St. Lawrence Valleys. Local gales occurred on three occasions.

In the Lower St. Lawrence Valley and Gulf, strong northeasterly winds were most in evidence, and gales were experienced on six occasions.

In the Maritime Provinces the direction was southerly and southwesterly, and strong winds were occasionally recorded as well as one gale.

TEMPERATURE.

The mean temperature was a little higher than average in the northern portions of Ontario, Manitoba and Saskatchewan and on Vancouver Island, while in other parts of the Dominion it was below average, the largest negative departure, about 4° , being in Southwestern Ontario. The month opened rather cool in nearly all parts of the Dominion, but within a few days the weather became warm and seasonable. In the West no very pronounced heat spells occurred, but in Ontario and Quebec after the 16th the temperature frequently exceeded 80° , and on several days 90° was reached in many localities.

The Highest and Lowest temperatures in each Province during June 1907, were :

British Columbia,	$95^{\circ} \cdot 0$ on 23rd at Salmon Arm,	$25^{\circ} \cdot 0$ on 12th at Big Creek.
Alberta,	$88^{\circ} \cdot 6$ on 27th at Lethbridge,	$24^{\circ} \cdot 0$ on 1st at Kneehill.
Saskatchewan,	$88^{\circ} \cdot 0$ on 26th at Battleford,	$32^{\circ} \cdot 0$ on 4th at Alameda and Moose Jaw.
Manitoba,	$92^{\circ} \cdot 0$ on 20th at St. Albans,	$28^{\circ} \cdot 5$ on 5th at Brandon.
Ontario,	$96^{\circ} \cdot 6$ on 17th at Haileybury,	$31^{\circ} \cdot 7$ on 11th at Clontarf.
Quebec,	$91^{\circ} \cdot 5$ on 23rd at St. Ann de Bellevue,—	$31^{\circ} \cdot 0$ on 8th at Father Point.
New Brunswick,	$94^{\circ} \cdot 0$ on 23rd at Chatham, 18th at Woodstock,—	$29^{\circ} \cdot 0$ on 1st and 4th at Sussex.
Nova Scotia,	$87^{\circ} \cdot 0$ on 24th at Port Hastings, 19th at Windsor—	$27^{\circ} \cdot 9$ on 2nd at Sydney.
P. E. Island,	$85^{\circ} \cdot 0$ on 24th at Hamilton,	$34^{\circ} \cdot 0$ on 4th and 11th at Summerside.

RAINFALL.

Over the Dominion as a whole the rainfall of June was less than average, the most pronounced deficiencies occurring in Southern New Brunswick, New Ontario and in British Columbia. In Alberta the fall was nearly average, as it also was in Northern New Brunswick and Southwestern Ontario. Nearly all stations in the Province of Quebec recorded an excess approximating one inch; and Western Manitoba and Southern Saskatchewan also recorded an excess, and in some few localities the rainfall may have been as much as double the average amount.

BRIGHT SUNSHINE.

Bright Sunshine was deficient throughout Canada during June, except in Vancouver Island, B.C., and near the eastern end of Lake Ontario, Ont., where slightly supernormal values were recorded.

The extremes of departure from average were -10% at Brandon and Winnipeg, Man., and $+4\%$ at Victoria, B.C., and the maximum daily amount, 97% , was registered at Lindsay, Ont., on the 27th.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JUNE, 1967.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.		PRESSURE.		TEMPERATURE.						DIRECTION OF WIND FROM										PRECIPITATION		No. of days with or more than 0.01 in. of rain.	No. of days with or more than 0.01 in. of snow.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
			Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Years observed in.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of cloud.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.	W.			N.W.	C.	Total number of observations.	Mean miles per hour.	Highest days velocity.	Date and direction from.	Amount.	No. of days with or more than 0.01 in. of rain.	No. of days with or more than 0.01 in. of snow.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JUNE, 1907.

a parameter not related to sea level. * Station not furnished with registering thermometers.

[illegible]

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING JUNE, 1907.

STATION.	RAINFALL					SNOWFALL				REMARKS.
	Amount in inches	No. of Days, 0.1 or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days	Heaviest Fall in Month	Date	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Coquitlam.....	1.67	9	21	0.45	13					Thunder 20th.
Dennan Island.....	1.37	8	22	0.30	11					
Goldstream Lake.....	1.11	8	22	0.28	12					
Hartley Bay.....	2.96	10	20	0.97	7					
Nanaimo.....	1.68	6	21	0.65	11					
Nas Harbour.....	1.56	15	15	0.43	8					
Royal Oak.....	0.38	2	28	0.20	9					
Sonias River.....	1.37	6	21	0.76	11					Thunder 20th.
Swanson Bay.....	3.61	17	13	1.02	7					
ALBERTA—										
Bruderheim.....	2.61	12	18	0.72	8					Aurora 9th, 23rd, thunder 12th, 13.
Bittern Lake.....	2.74	13	17	0.58	20					Thunder 5th, 26, 27.
Bardo.....	2.80	9	21	0.70	13					Thunder 12th, 13, 18, 26, 27.
Beaver Hills, W.....	2.94	14	16	1.02	7					
Bismark.....	1.83	15	15	1.31	29					Thunder 12th, 13, 18, 26, 27.
Coutts.....	1.47	9	21							
Conjuring Creek.....	3.93	11	19	0.92	8					
Clover Bar.....	2.11	4	26	0.88	27					
Dorcnlee.....	3.67	10	20	1.00	30					
Grassy Lake.....	0.40	5	25	0.20	20					
Heather Brae.....	3.46	15	15	0.89	29					Thunder 12th, 18.
Innisfail.....										
Islay.....										
Josephburg.....	3.07	8	2	1.37	22					11th Tornado between 5 and 6 p.m., heavy thunder and lightning.
Jumping Pound.....	3.67	15	15	0.59	7					Thunder 12th, 26.
Lacombe.....	5.50	8	22	1.74	30					Thunder 12th, 18.
Magrath.....	3.25	7	23	1.28	22					
Macleod.....	1.47	9	21	2.00	22					
Mayton.....	4.61	8	22	1.62	13					
Morinville.....	2.73	8	21	0.60	13					
Okotoks.....	1.55	11	19	0.91	22					Thunder 1st, 11, 12, 28.
Ponoka.....	5.77	14	16	2.08	29					Thunder 5th, 12, 13, 14, 15, 25.
Saddle Lake.....	0.85	4	17	0.36	6					
Sion.....	1.17	16	11	0.99	8					Thunder 13th, 17, 18, 19, 20, 26, 28
Stirling.....										Thunder 19th, 20.
Vermilion.....	0.52	5	25	0.20	2					Thunder 19th, 20.
Wabamun.....	4.52	18	12	0.76	13					
SASKATCHEWAN										
Elm How.....	3.60	12	17	1.45	15					Thunder 3rd, 13, 14, 15, 16, 29.
Hanley.....	2.13	6	21	0.67	29					Thunder 13th, 14, 15, 16, 20, 24, 27.
Insinger.....	5.23	12	18	1.42	15					Aurora 19th.
Last Mountain.....	4.36	11	15	0.93	30					Thunder 6th, 14.
Regina.....	5.22	18	10	1.75	14					Thunder 13th, 14, 19, 20, 27.
MANITOBA—										
Beaver.....	1.18	7	18	0.65	24					Thunder 1st, 13, 20, 21, 23, 29.
Cartwright.....	2.23	16	11	0.82	21					Aurora 19th.
Gretna.....	1.88	6	20	0.88	10					Thunder 20th, 21, 23.
Norquay.....	0.64	9	20	0.28	21					Thunder 19, 20, 21, 23, 24, 28, 29.
Rapid City.....	3.89	13	15	1.05	24					Thunder 10th, 14, 16, 20, 23, 24, 27, 28, 29. Aurora 19th.
Rosebank.....										
ONTARIO—										
Arden.....	1.07	6	24	0.45	5					Thunder 20th, 26.
Aurora.....	3.18	7	22	1.45	25					Thunder 19th, 21, 23, 25.
Croydon.....	0.80	2	28	0.51	5					Thunder 18th.
Dutton.....	2.76	4	18	1.00	1					
Deer Park.....	1.36	5	25	0.55	5					
Ennismore.....	3.75	6	24	1.05	19					
Emsdale.....	5.42	10	19	1.93	23					Thunder 19th, 21, 22, 23, 24.
Goderich.....	1.91	7	23	1.00	5					
Georgetown.....	2.58	8	16	1.13	21					
Huntsville.....	1.15	9	21	1.30	22					Thunder 18th, 19, 21, 22, 23, 24, 30. Aurora 9th.
Lansdowne.....	1.65	3	19	0.69	25					Thunder 19th, 21, 22, 23, 24.
Midland.....	3.94	9	20	1.18	4					Thunder 5th, 19, 21.
Montague.....	0.95	4	25	0.26	5					Thunder 19th, 21, 22, 23, 26, 29.
MacCue.....	0.43	3	27	0.18	4					06.0 on 19th.
Orangeville.....	2.57	5	24	0.82	20					
Princepton.....	2.38	6	24	1.15	4					Thunder 19th, 30.
Parna.....										
Strathroy.....	4.39	9	24	1.06	19					Thunder 19th, 23, 25.
Sunnyside.....	1.81	5	20	0.97	4					Thunder 14th, 19, 30.
Sydenham.....	1.67	4	25	0.75	30					
Westport.....	0.84	3	27	0.47	30					Thunder 5th, 15, 19, 25, 30.
Warton.....	1.23	5	20	0.54	5					Thunder, 22, 25.
Wyoming.....										
Watford.....	2.89	6	20	0.76	25					
Westminster.....	2.60	6	21	0.91	26					Thunder 19th, 24.
NEW BRUNSWICK—										
Point Escuminac.....	2.46	6	19	1.06	26					Thunder 6th, 24.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF JUNE, 1907.

STATIONS	HOURS ENDING															
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	8 p. m.
Victoria		0.00	0.04	0.38	0.59	0.50	0.40	0.61	0.70	0.69	0.65	0.65	0.59	0.55	0.38	0.16
Nanaimo		0.10	0.36	0.56	0.57	0.59	0.58	0.52	0.53	0.45	0.52	0.49	0.53	0.55	0.54	0.41
Agassiz		0.10	0.00	0.17	0.31	0.32	0.36	0.48	0.46	0.47	0.47	0.37	0.32	0.23	0.11	0.00
Kamloops		0.00	0.36	0.42	0.46	0.50	0.58	0.54	0.49	0.53	48	0.45	0.40	0.38	0.31	0.24
Savona																0.01
Calgary		0.04	0.30	0.56	0.54	0.59	0.58	0.56	0.64	0.64	0.58	0.56	0.59	0.57	0.46	0.18
Medicine Hat	0.07	0.54	0.51	0.59	0.63	0.63	0.60	0.58	0.54	0.55	0.61	0.61	0.59	0.55	0.41	0.17
Edmonton		0.10	0.52	0.54	0.48	0.58	0.59	0.61	0.62	0.66	0.58	0.54	0.55	0.50	0.50	0.44
Battleford																0.11
Indian Head		0.10	0.12	0.40	0.46	0.46	0.53	0.50	0.52	0.57	0.64	0.53	0.56	0.47	0.44	0.08
Brandon		0.00	0.01	0.14	0.30	0.46	0.55	0.58	0.57	0.56	0.52	0.59	0.50	0.47	0.31	0.07
Winnipeg		0.00	0.2	0.45	0.47	0.48	0.55	0.53	0.58	0.62	0.63	0.65	0.56	0.57	0.51	0.23
Woodstock			0.12	0.42	0.57	0.64	0.68	0.66	0.69	0.67	0.65	0.64	0.58	0.56	0.53	0.34
Toronto			0.02	0.50	0.69	0.69	0.71	0.80	0.78	0.72	0.65	0.65	0.57	0.52	0.51	
Lindsay		0.07	0.28	0.31	0.35	0.57	0.62	0.65	0.69	0.63	0.72	0.61	0.64	0.59	0.41	0.33
Barrie			0.32	0.57	0.68	0.74	0.79	0.82	0.85	0.81	0.71	0.71	0.61	0.60	0.66	0.52
Gravenhurst			0.02	0.38	0.58	0.59	0.61	0.61	0.72	0.7	0.69	0.67	0.62	0.60	0.60	0.42
Halleybury		0.04	0.35	0.49	0.53	0.58	0.64	0.65	0.63	0.65	0.71	0.66	0.61	0.50	0.50	0.40
Kingston		0.00	0.26	0.55	0.62	0.74	0.78	0.83	0.79	0.74	0.68	0.68	0.63	0.57	0.48	0.15
Ottawa				0.19	0.41	0.54	0.62	0.67	0.67	0.75	0.72	0.58	0.53	0.57	0.46	0.15
Montreal			0.04	0.27	0.36	0.55	0.60	0.50	0.58	0.59	0.66	0.61	0.57	0.53	0.32	0.03
Sherbrooke		0.07	0.24	0.37	0.49	0.46	0.52	0.60	0.61	0.60	0.57	0.50	0.54	0.53	0.44	0.26
Quebec			0.13	0.24	0.30	0.35	0.40	0.48	0.54	0.52	0.51	0.39	0.45	0.44	0.28	0.16
Fredericton			0.15	0.28	0.36	0.39	0.46	0.59	0.51	0.53	0.53	0.51	0.49	0.47	0.40	0.29
Charlottetown		0.02	0.33	0.43	0.49	0.54	0.56	0.53	0.57	0.61	0.59	0.60	0.60	0.61	0.59	0.34

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savona.	Calgary	Medicine Hat.	Edmonton.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Halleybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month <i>Constant sunshine being 1</i>	0.41	0.15	0.25	0.37		0.47	0.50	0.47		0.39	0.35	0.43	0.51	0.51	0.49	0.62	0.48	0.50	0.55	0.44	0.43	0.43	0.32	0.38	0.47
Difference from average.	+ 0.01	-	- 0.05	-		-	-	-		- 0.03	- 0.10	- 0.10	0.02	- 0.05	- 0.05	+ 0.14	-	-	- 0.02	- 0.01	- 0.07		-	- 0.08	
Maximum daily amount.	0.82	0.89	0.71	0.86		0.91	0.91	0.88		0.79	0.70	0.84	0.89	0.79	0.97	0.91	0.82	0.90	0.85	0.78	0.91	0.89	0.85	0.80	0.92
Date	24-25	2	18	23		25	25	2		25	19	27	9	9	10	27	7	15	10	8	11	12	28	28	14
No. of days completely clouded	2	3	8	1		8	2	1		3	5	3	5	1	2		2	6	3	2	2	2	1	8	6

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

2. Waitefield, III.
3. Paspebiac, IV ; Percé, Cape Chatte, Father Point, IV.
8. Waitefield, IV.
9. Bruderheim, Huntsville, Lake Talon, Gray Hill, III ; Haileybury, III.
10. Woodstock, N.B., Edmonton, III ; Haileybury, III ; Quebec, IV.
11. Haileybury, IV.
17. Waitefield, II.
19. Insinger, Cartwright, Rapid City, Cape Chatte, Kenora, II ; St. Albans, I ; Almasippi, I ; Waitefield, IV ; Haileybury, I.
27. Haileybury, III.
28. Father Point, IV.

Thunder recorded on :

1. Okotoks, Cartwright, Pekisko, High River, Hamilton.
2. Pekisko, High River, Lethbridge, Port Burwell.
3. Elm How, Chaplin, Port Burwell.
4. Quesnelle, Princeton, Big Creek, Vancouver.
5. Bittern Lake, Ponoka, Lansdowne, Westport, Alix, Hillsdown, Gray Hill, Red Willow, Blackfalds, Bon Accord, Chaplin.
6. Last Mountain, Pt. Esplanade, Chaplin.
7. High River, Chaplin, Summerside.
8. North Nicomen, Kneehill, Hillsdown, Gray Hill, Chaplin, Wolfville, Woodstock, N.B.
9. Morden.
10. Rapid City, North Nicomen, Chaplin.
11. Josephsburg, Okotoks, Kneehill, High River.
12. Bruderheim, Bardo, Bismark, Heather Brae, Jumping Pound, Lacombe, Okotoks, Ponoka, Alix, Waitefield, Pekisko, Pakan, Macleod, High River, Hillsdown, Gray Hill, Lawrence, Red Willow, Bon Accord.
13. Bruderheim, Bardo, Bismark, Ponoka, Sion, Elm How, Insinger, Regina, Cartwright, Red Willow, Blackfalds, Bon Accord, Saskatoon, Regina, Moose Jaw, Gatesgarth, Chaplin, St. Albans, Almasippi.
14. Ponoka, Elm How, Insinger, Last Mountain, Regina, Rapid City, Sunnyside, Blackfalds, Moose Jaw, Gatesgarth, Alameda, Indian Head, Madoc, Percé, Woodstock, N.B., Summerside.
15. Ponoka, Elm How, Insinger, Westport, Macleod, Lawrence, Moose Jaw, Gatesgarth, Chaplin, Alameda, Indian Head, Otonabee.
16. Elm How, Insinger, Rapid City, High River, Saskatoon, Regina, Chaplin, Alameda, St. Albans, Point Clark, Sussex.
17. Sion, Point Clark, Chicoutimi.
18. Bardo, Bismark, Heather Brae, Lacombe, Sion, Croydon, Georgetown, Salmon Arm, Alix, Kneehill, Pakan, Hillsdown, Gray Hill, Red Willow, Bon Accord, Agincourt, Otonabee, Point Clark, Hamilton, Lucknow, Lake Talon, Clinton, Brome, Woodstock, N.B., Hamilton, P.E.I.
19. Sion, Sterling, Vermilion, Regina, Norquay, Aurora, Emsdale, Georgetown, Huntsville, Lansdowne, Midland, Princeton, Strathroy, Sunnyside, Westport, Westminster, Blackfalds, Bon Accord, Saskatoon, Almasippi, Agincourt, Clontarf, Haliburton, Port Hope, Madoc, Otonabee, Peterboro', Stony Creek, Point Clark, Birnam, Brantford, Hamilton, Port Burwell, Paris, Orillia, Beatrice, Owen Sound, North Bruce, Meaford, Lucknow, Lake Talon, Barrie, Brome, Wolfville, Woodstock, N.B., Bala.
20. Somas River, Sion, Sterling, Vermilion, Insinger, Regina, Cartwright, Gretna, Norquay, Rapid City, Arden, Salmon Arm, Alberni, Saskatoon, Regina, Moose Jaw, Gatesgarth, Chaplin, Indian Head, Morden, Almasippi, Point Clark, Sutton West, North Bruce, Kenora, Coquitlam, Brome.
21. Cartwright, Gretna, Norquay, Aurora, Emsdale, Georgetown, Huntsville, Midland, Princeton, North Nicomen, Indian Head, Morden, Almasippi, East Toronto, Stony Creek, Birnam, Cottam, Brantford, Hamilton, Beatrice, North Bruce, Meaford, Lucknow, Lake Talon, Barrie, Bala, Chilliwack.
22. Emsdale, Georgetown, Huntsville, Midland, East Toronto, Haliburton, Otonabee, Peterboro', Point Clark, Sutton West, Hamilton, Orillia, Beatrice, North Bruce, Lake Talon, Bruce Mines, Brome, Bala.

23. Cartwright, Gretna, Norquay, Rapid City, Aurora, Ensdale, Georgetown, Huntsville, Midland, Strathroy, Estevan, Alameda, St. Albans, Oakbank, Morden, Alma, Ippi, East Toronto, Agincourt, Haliburton, Otonabee, Peterboro', Stony Creek, Point Clark, Sutton West, Birnam, Cottam, Hamilton, Port Burwell, Orillia, Beatrice, Huntsville, Owen Sound, North Bruce, Meaford, Lucknow, Lake Talon, Clinton, Barrie, Bala.

24. Insinger, Norquay, Rapid City, Ensdale, Huntsville, Lansdowne, Westminster, Pt. Esmé, Princeton, Big Creek, Clontarf, Haliburton, Madoc, North Gower, Otonabee, Point Clark, Sutton West, Birnam, Beatrice, Huntsville, Owen Sound, North Bruce, Lucknow, Clinton, Barrie, Percé, Paspébie, Moncton, Summerside.

25. Ponoka, Aurora, Strathroy, Westport, Salmon Arm, Clontarf, Haliburton, Point Clark, Sutton West, Birnam, Huntsville, Owen Sound, North Bruce, Meaford, Lucknow, Cockburn Island, Clinton, Bruce Mines, Brome, East Pt. Sable Island, Woodstock, N.B., St. Stephen.

26. Bittern Lake, Bardo, Bismark, Jumping Pound, Sion, Arden, Midland, Tobacco Plains, Quesnelle, Alix, Waitefield, Pekisko, Pagan, High River, Red Willow, East Toronto, Haliburton, Madoc, Otonabee, Peterboro', Sutton West, Port Dover, Hamilton, Orillia, Huntsville, Barrie, Brome.

27. Bittern Lake, Bardo, Bismark, Insinger, Regina, Rapid City, Tobacco Plains, Nickel Plate, Big Creek, Golden, Waitefield, Kneehill, Pekisko, Gray Hill, Red Willow, Didsbury, Regina, Alameda, Indian Head, St. Albans, North Gower, Lake Talon, Paspébie, Percé, Pt. Lepreaux.

28. Okotoks, Sion, Norquay, Rapid City, Tobacco Plains, Golden, Waitefield, Wetskiwin, Kneehill, High River, Gray Hill, Red Willow, Moose Jaw, Gatesgarth, Chaplin, St. Albans, Oakbank, Almasippi.

29. Elm How, Cartwright, Norquay, Rapid City, Georgetown, Midland, Big Creek, Red Willow, Regina, Chaplin, Estevan, Alameda, Morden, East Toronto, Madoc, Otonabee, Peterboro', Owen Sound, North Bruce, Meaford, Clinton, Barrie, Bala.

30. Georgetown, Princeton, Sunnyside, Westport, Salmon Arm, Big Creek, Waitefield, Haliburton, Madoc, Otonabee, Sutton West, Hamilton, Lucknow.

FORECASTS FOR JUNE, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1137. These were divided as follows :—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully.	No. Partly.	No. Not.	Per- centage.
Alberta	75	62	8	5	88.0
Saskatchewan	75	65	9	1	92.7
Manitoba	75	59	12	4	86.7
Lake Superior	92	76	9	7	87.5
Lower Lake Region	116	101	11	4	91.4
Georgian Bay	116	103	8	5	92.2
Ottawa Valley.	87	79	6	2	91.3
Upper St. Lawrence	87	81	5	1	96.0
Lower St. Lawrence	102	87	9	6	89.7
Gulf.	102	88	7	7	89.7
Maritime Provinces, West	105	93	10	2	93.3
Maritime Provinces, East	105	90	10	5	90.5
Total	1137	987	101	49	91.1

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto,
August, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review

VOL. XXXI.

JULY, 1907.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather on the lower mainland of British Columbia was slightly warmer than usual and at some places quite high temperatures were occasionally recorded, 90° being exceeded at several stations during the last three days of the month. In most districts there was much bright sunshine, fine weather being almost continuous from the 5th to 12th, 13th to 24th and during the last four days. The chief falls of rain occurred on or about the 3rd, 4th, 13th and 14th, and from the 24th to 27th, but the falls were mostly light and the aggregate amount was below the average. The condition of vegetation was normal. The weather on the upper mainland was similar to that in districts to the westward, excepting in the rainfall which on the contrary exceeded the average at many stations, showers occurring frequently from the 4th to 6th, and on or about the 10th, 13th, 14th, 18th, 21st, 22nd and 26th. In this portion of the province vegetation was in excellent condition on the last day of the month.

In the Western Provinces the weather was somewhat cooler than usual in most districts but at a few places in the extreme western portion of Alberta the mean temperature on the contrary was above the average. Fine weather occurred during the first and last few days of the month in Alberta, but from the 6th to 28th it was mostly dull. In Saskatchewan the dates of rainfall varied considerably. The proportion of bright sunshine of the month was below the average. During the dull period mentioned, showers were frequent, but in most localities the total precipitation was below the average. Vegetation made rapid progress during the month and on the 31st its condition was not much below normal.

The weather in Manitoba did not depart much from the normal excepting in the rainfall which varied considerably with the district, it being above the average at some places and below at others. Similar conditions regarding the dates of rainfall were noticeable, and whilst the proportion of bright sunshine recorded at Winnipeg was above the average that at other stations in the province was below. Showers, however, were frequent generally and vegetation made excellent progress.

In Ontario there was much fine bright weather, more especially from the 2nd to 5th, 13th to 19th and 27th to 31st. The chief falls of rain occurred on or about the 1st, 6th, 8th, 11th, 12th and 17th, also frequently from the 20th to 26th and on the last two days of the month. In most districts the total precipitation was below the average but at some places in the western portion of the province and in districts contiguous to Lake Superior it was excessive. The mean temperature did not depart much from the average, but in most localities the weather was cooler than usual. Owing doubtless to the frequent showers vegetation made good progress and on the 31st its condition differed little from the normal.

In the Province of Quebec the weather was comparatively cool during the first half of the month, and in the eastern portion of the province the mean temperature of the month was below the average. Elsewhere the weather was somewhat warmer throughout the month. Dull weather prevailed and rain was frequent, the total precipitation being quite excessive. A severe thunderstorm occurred at Quebec on the 20th, causing loss of life and much damage to property. Reports regarding the condition of vegetation were mostly favourable.

The weather in New Brunswick was exceedingly dull and there was little bright sunshine excepting from the 13th to 22nd, when some quite fine weather was recorded. Falls of rain though not very



frequent were heavy, they being chiefly recorded on or about the 2nd, 4th, 7th, 10th, 13th, 21st, 25th, 27th and 31st. Somewhat cool weather prevailed during the first and last week, but the mean temperature of the month departed very little from the average. Severe thunderstorms were frequent and did considerable damage to crops. Fogs were also unusually frequent in the Bay of Fundy. Vegetation was backward.

In Nova Scotia the weather was mostly cloudy with occasional rain during the first two weeks, after which it was comparatively fine, warm and dry up to the 23rd, when dull wet weather again set in and continued to the end of the month. After the 22nd the weather was quite cool and the mean temperature of the month was slightly below the average. The condition of vegetation on the 31st was normal.

The weather in Prince Edward Island was mostly dull, cool and wet, the mean temperature being somewhat below the average and the rainfall above. From the 1st to 11th and 15th to 20th comparatively warm weather prevailed and vegetation made good progress.—F. F. PAYNE.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for July was above the normal over Saskatchewan, Alberta and the greater part of British Columbia, while over the remainder of the Dominion it was below. The extremes of departure from normal were $+0.07$ of an inch at Prince Albert and -0.13 of an inch at Montreal and Quebec.

HIGH AREAS.

Five areas of high pressure were charted during the month, all displaying the characteristic feebleness usually found in connection with the summer type of anticyclonic systems. They all first appeared on or in close proximity to the North Pacific States, their centres passing south of the Lake Region. Two reached the Atlantic coast but the other three dispersed before doing so.

LOW AREAS.

During the month ten areas of low pressure were sufficiently well defined to allow of their paths being accurately traced. Eight first appeared in the northwestern portion of the continent and two in the southwestern portion, all ultimately with one exception converging towards the Gulf of St. Lawrence.

The depression which appeared to the northward of Alberta on the 23rd, after reaching the Lake Region on the 25th, rapidly developed into a disturbance unusually energetic for the summer season, and as it passed down the St. Lawrence it caused gales from the Lake Region to the Maritime Provinces, when, at the same time, extraordinarily high tides were experienced in the Gulf of St. Lawrence.

TEMPERATURE.

The temperature was above the average in July over British Columbia; also very locally in the Western Provinces, Ontario and the central portion of Quebec, but over the greater portion of Canada, it was below the average. Departures from average were not pronounced except in the Gaspe Peninsula in Quebec where negative departures of 5 degrees were recorded.

The Highest and Lowest temperatures in each Province during July 1907, were:

British Columbia,	16° on 20th at Kitamaat,	31° ·0 on 7th at Stuart's Lake.
Alberta,	92° on 31st at Lawrence,	28° ·0 on 5th at Lawrence.
	92° on 28th at Medicine Hat.	
Saskatchewan,	87° on 5th and 12th at Regina,	{ 37° on 29th at Broadview,
		{ 37° on 7th at Chaplin.
Manitoba,	98° on 12th at Birtle,	34° on 1st at Treherne.
Ontario,	98° on 9th at Point Clark,	31° on 2nd at White River.
Quebec,	90° on 19th at Chicoutimi,	35° on 26th at Abitibi.
New Brunswick,	90° on 17th at Chatham,	44° on 11th at St. Stephen.
Nova Scotia,	88° on 17th at Port Hastings,	40° on 15th at Sydney.
P. E. Island,	83° on 20th at Charlottetown,	48° on 15th at Hamilton.

PRECIPITATION.

An excess of precipitation was recorded over large sections of British Columbia, Manitoba, Ontario, Quebec and the Maritime Provinces, whereas the remaining portions of Canada shewed a deficiency in the rainfall. Departures from normal were very marked, positive differences being a

high as 95 per cent in the Gaspé Peninsula of Quebec as well as in northern New Brunswick, and negative departures of from 40 to 50 per cent were recorded in the southern portions of Alberta and Saskatchewan.

BRIGHT SUNSHINE.

The amount of bright sunshine recorded during July was in excess of the average over the greater portion of Canada, negative departures being only recorded in parts of Quebec, the Maritime Provinces and Manitoba. The largest positive departure was 16% at Toronto, Ont., and the largest negative departure 35% at Fredericton, N.B.

WINDS.

In British Columbia, on Vancouver Island, and over the mainland, the direction was chiefly southerly to westerly, with two days with strong and eight with fresh breezes.

In Alberta and Saskatchewan the westerly direction slightly predominated, with ten days with strong and nine with fresh breezes.

In Manitoba the direction was largely westerly with ten days strong and fourteen with fresh breezes.

In the Lake Region the direction was often variable, favouring slightly the south and west, with seven days with strong and ten with fresh breezes and one gale.

In the Ottawa and Upper St. Lawrence Valleys the south and west directions generally prevailed, with three days with strong and seven with fresh breezes and one gale.

In the Lower St. Lawrence Valley and the Gulf the direction was variable, the easterly, however, being often in evidence. There were nine days with strong and eleven days with fresh breezes and one gale.

In the Maritime Provinces the direction was variable with five days strong and eight with fresh breezes and one gale.

The gale which was experienced from the Lake Region to the Maritime Provinces occurred on the 26th instant, and in the Gulf of St. Lawrence it was attended by an unusually high tide. Warnings were issued for the gale in all the districts affected, but in the Lake Region, in several localities, it was not received before the storm had begun.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1907.
a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	PRESSURE.			TEMPERATURE.				No. of days completely clouded.	DIRECTION OF WIND FROM						VELOCITY OF WIND.			PRECIPITATION.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
	Elevation above sea level, in feet.	Mean reduced.		Highest.	Date.	Lowest.	Date.		Mean.	Difference from average.	Years observed.	N.E.	E.	S.E.	S.	S.W.	W.		N.W.	Total number of observations.	Mean number of observations.	Mean velocity, in miles per hour.	Direction of wind.	Force of wind.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1967.

a barometer not reduced to Sea Level. * Stations not furnished with registering thermometers.

[illegible]

MIANTORA - CORK.

Oxytetracycline-

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PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, JULY, 1907.

a barometer not reduced to sea level.

[illegible]

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &
DURING JULY, 1907.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF JULY, 1907.

STATIONS.	HOURS ENDING															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria	0.00	0.10	0.09	0.73	0.71	0.81	0.91	0.93	0.90	0.87	0.81	0.82	0.81	0.73	0.32	
Nanaimo	0.00	0.10	0.73	0.85	0.89	0.88	0.86	0.91	0.83	0.80	0.77	0.79	0.83	0.74	0.63	
Agassiz	0.00	0.00	0.11	0.52	0.36	0.06	0.70	0.77	0.75	0.77	0.82	0.68	0.50	0.35	0.10	
Kamloops	0.00	0.13	0.07	0.76	0.81	0.83	0.87	0.82	0.81	0.78	0.80	0.69	0.57	0.53	0.39	
Savona																
Calgary	0.01	0.50	0.61	0.67	0.71	0.74	0.76	0.78	0.77	0.71	0.66	0.68	0.59	0.50	0.41	0.05
Medicine Hat																
Edmonton	0.03	0.15	0.05	0.72	0.71	0.71	0.68	0.62	0.68	0.79	0.78	0.75	0.71	0.72	0.47	0.05
Battleford																
Indian Head	0.00	0.08	0.49	0.61	0.61	0.67	0.68	0.70	0.71	0.63	0.63	0.63	0.66	0.57	0.41	
Brandon	0.00	0.00	0.25	0.69	0.83	0.85	0.86	0.79	0.81	0.77	0.71	0.66	0.67	0.46	0.11	
Winnipeg	0.00	0.39	0.61	0.72	0.78	0.80	0.95	0.86	0.82	0.85	0.81	0.80	0.71	0.51	0.27	
Woodstock		0.10	0.57	0.76	0.82	0.83	0.86	0.72	0.73	0.80	0.78	0.68	0.69	0.56	0.32	
Toronto		0.01	0.46	0.63	0.68	0.81	0.78	0.82	0.80	0.81	0.83	0.80	0.70	0.58	0.02	
Lindsay	0.01	0.23	0.35	0.43	0.57	0.61	0.68	0.67	0.65	0.73	0.75	0.72	0.68	0.71	0.65	0.25
Barrie		0.30	0.18	0.53	0.68	0.68	0.75	0.73	0.83	0.81	0.79	0.77	0.77	0.62	0.28	0.01
Gravenhurst		0.15	0.39	0.55	0.61	0.65	0.69	0.69	0.75	0.75	0.77	0.73	0.68	0.37	0.14	0.00
Haileybury	0.02	0.33	0.15	0.55	0.61	0.61	0.63	0.58	0.57	0.53	0.49	0.56	0.53	0.58	0.52	0.04
Kingston	0.00	0.42	0.69	0.72	0.72	0.69	0.72	0.73	0.73	0.68	0.65	0.66	0.63	0.45	0.19	
Ottawa		0.06	0.40	0.61	0.69	0.72	0.73	0.75	0.72	0.69	0.61	0.61	0.53	0.38	0.09	
Montreal		0.08	0.45	0.48	0.51	0.58	0.64	0.67	0.73	0.67	0.68	0.59	0.55	0.39	0.01	
Sherbrooke	0.00	0.36	0.49	0.51	0.60	0.64	0.71	0.68	0.66	0.62	0.65	0.66	0.60	0.52	0.29	
Quebec		0.10	0.33	0.41	0.49	0.53	0.60	0.60	0.64	0.65	0.54	0.52	0.48	0.46	0.15	
Fredericton		0.06	0.24	0.30	0.35	0.39	0.39	0.49	0.51	0.50	0.50	0.46	0.49	0.40	0.26	0.01
Charlottetown	0.01	0.12	0.21	0.36	0.29	0.36	0.41	0.15	0.50	0.50	0.50	0.19	0.15	0.43	0.15	

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savona.	Calgary	Medicine Hat.	Edmonton.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton	Charlottetown
Mean proportion for month Constant sunshine being 1	0.65	0.70	0.47	0.61		0.57		0.58		0.49	0.53	0.61	0.61	0.58	0.57	0.60	0.52	0.49	0.57	0.50	0.46	0.53	0.41	0.35	0.34
Difference from average.	+ 0.07	—	+ 0.03	—		—		—		— 0.06	— 0.03	+ 0.08	+ 0.08	+ 0.08	0.00	+ 0.04	—	—	0.00	0.02	0.13	—	—	0.19	—
Maximum daily amount.	0.82	0.89	0.75	0.91		0.91		0.86		0.77	0.76	0.86	0.86	0.79	0.66	0.92	0.81	0.90	0.89	0.85	0.81	0.91	0.80	0.88	0.86
Date	7-9	7	7-8	30		1		30		5	30	9-10	9-10	13	9	9	27	18	13	21	21	14	3-4	1	15
No. of days completely clouded	0	0	2	2		2		1		0	0	1	1	1	1	2	3	0	2	2	3	1	3	6	3

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. St. Albans, II.
5. Bruce Mines, Chaplin, Waitefield, III.
6. Grenfell, II ; Waitefield, IV.
8. Gray Hill, Waitefield, IV ; Knee Hill.
9. Waitefield, IV.
10. Woodstock, N.B., Hamilton, Brantford, IV ; Lake Talon, St. Albans, II ; Grenfell, I ; Fox-leigh, Chaplin, Waitefield, III ; Cartwright, Georgetown.
11. Estevan.
17. St. Albans, IV.
21. Gray Hill, IV ; Bruderheim.
27. Haliburton, Hamilton, Lake Talon, Bruce Mines, Owen Sound, Lucknow, II ; Treherne, St. Albans, II ; Chaplin, Waitefield, I ; Pakan, III ; Salmon Arm, Summerland, Denman Island, Bruderheim, Georgetown.
28. Paspebiac, IV ; St. Albans, II ; Waitefield, I ; Bruderheim,
31. Chaplin.

Thunder recorded on :

1. Arden, Georgetown, Midland, Princeton, Westport, Madoc, Brantford, Birman, Peterboro', Agincourt, Lake Talon, Sutton, Waitefield, Bon Accord, Big Creek.
2. Denman Isld., Somas River, Insinger, Rapid City, Summerside, Brome, Sutton, St. Albans, Ladner.
3. Josephburg, Insinger, Cartwright, Norquay, Rapid City, Kenora, Moncton, St. Albans, Fox-leigh, Regina, Estevan, Macleod, Tobacco Plains, Salmon Arm, Summerland, Princeton, Rossland, North Nicomen, Ladner, Tzouhalem, Big Creek.
4. Heather Brae, Insinger, Rapid City, Wolfville, Regina, Estevan, Red Willow, Rossland.
5. Gretna, Norquay, Woodstock, N.B., St. Stephen, Brome, Paspebiac, Otonabee, North Gower, Oakbank, Pekisko.
6. Leavings, Norquay, Rapid City, Aurora, Emsdale, Georgetown, Westport, Paspebiac, Hamilton, Madoc, Agincourt, East Toronto, Stony Creek, Lake Talon, Orillia, Grenfell, Estevan, Tobacco Plains.
7. Arden, Lansdowne, Summerside, Pt. Lepreaux, St. Stephen, Port Dover, Kenora, Sutton, Meaford.
8. Jumping Pound, Leavings, Sion, Vermilion, Croydon, Lansdowne, Midland, Westport, Wooler, Warton, Pt. Lepreaux, Brome, Madoc, Brantford, North Gower, Peterboro', Port Dover, Port Hope, Agincourt, East Toronto, Lake Talon, Owen Sound, Sutton, Orillia, Waitefield, Bon Accord, Kneehill, Red Willow.
9. Leavings, Summerside, Pt. Lepreaux, St. Stephen, Brome, Chicoutimi, Paspebiac, Sutton, Moncton, Lloydminster, Waitefield, Bon Accord, Tobacco Plains.
10. Beaver Hills W, Bittern Lake, Okotoks, Saddle Lake, Wabamun, Wolfville, High River, Waitefield, Wetaskiwin, Blackfalds, Bon Accord, Kneehill, Pakan, Pekisko, Tobacco Plains.
11. Bardo, Beaver Hills W, Bismark, Bruderheim, Elm How, Josephburg, Lacombe, Leavings, Sion, Vermilion, Insinger, Lake Talon, Regina, Lloydminster, Estevan, Gray Hill, Waitefield, Wetaskiwin, Bon Accord, Kneehill, Pakan, Red Willow, Salmon Arm.
12. Bruderheim, Leavings, Okotoks, Sion, Croydon, Emsdale, Summerside, Beatrice, Madoc, Estevan, High River, Bon Accord, Tobacco Plains.
13. Gretna, Bathurst, Kenora, Oakbank, High River, Big Creek.
14. Waitefield, Bon Accord, Salmon Arm, Nickel Plate, Princeton, Rossland, Nicola.
15. Cartwright, Oakbank, Salmon Arm, Princeton, Rossland, Big Creek, Nicola, Bella Coola, Alberni.
16. Beaver Hills W, Norquay, Otonabee, Meota, Tobacco Plains, Salmon Arm, Big Creek, Nicola.
17. Josephburg, Arden, Strathroy, Summerside, Birnam, Lloydminster, Alix, Hillsdown, Pakan.
18. Bruderheim, Jumping Pound, Insinger, Oakdale Park, Gray Hill, Waitefield, Blackfalds, Bon Accord, Red Willow, Princeton, Rossland.
19. Insinger, Norquay, Rapid City, Bruce Mines, St. Albans, Humboldt, Regina, Estevan, Blackfalds.

20. Elm How, Rapid City, Croydon, Huntsville, Elm Howne, Westport, Wooler, St. Stephen, Brome, Peterboro, Georgian Bay, Madoc, Otonabee, Peterboro, Port Hope, Agincourt, East Toronto, Kenora, Brantford, Oakland, Chaplin, Estevan, Blackfalds, Tobacco Plains, Golden, Salmon Arm, Rossland, Big Creek, Bella Coola.

21. Jumping Pound, Arden, Strathroy, Sutton, Whitefield, Tobacco Plains, Salmon Arm, Summerside, Nickel Plate, Princeton, Rossland, Big Creek, Bella Coola.

22. Deacons Lake, Elm How, Josephburg, Jumping Pound, Insinger, Rapid City, Georgetown, Port Hope, Agincourt, East Toronto, Foxleugh, High River, Gleichen, Pekisko, Salmon Arm, Big Creek.

23. Josephburg, Jumping Pound, Insinger, Lansdale, Agincourt, Kenora, Oakbank, Foxleugh, High River, Golden, Salmon Arm, Princeton, Rossland, Big Creek.

24. Beaver Hill, Insinger, Cartwright, Norquay, Georgetown, Lansdowne, Princeton, Westport, Wooler, Westport, Warton, Brome, Hamilton, Madoc, Paris, Brantford, Birnam, Otonabee, Peterboro, Port Hope, Port Burwell, Agincourt, East Toronto, Lake Talon, North Bruce, Lucknow, Orillia, Clinton, St. Albert, Indian Head, Foxleugh, Meota, Regina, Lloydminster, Saskatoon, Chaplin, Whitefield, Bon Accord, Pakin, Red Willow.

25. Norquay, Aurora, Croydon, Georgetown, Midland, Westminster, Cockburn Island, Hamilton, Paris, Stratford, Brantford, Birnam, Otonabee, Port Dover, Port Hope, Port Burwell, Agincourt, Bruce Mines, Kenora, Sutton, Lucknow, Clinton.

26. Jumping Pound, Okotoks, East Mountain, Lindsay, Georgetown, Huntsville, Princeton, Strathroy, Pt. Lepreau, Bathurst, St. Stephen, Brome, Beatrice, Hamilton, Brantford, Port Dover, Port Hope, East Toronto, Lake Talon, North Bruce, Sutton, Lucknow, Orillia, Foxleugh, Regina, Lloydminster, Gleichen, Bon Accord.

27. Pt. Lepreau, Fenora, Moneton, Oakdale Park, Foxleugh, Meota, Saskatoon.

28. Insinger, Bruce Mines, Oakbank, Chaplin, Blackfalds, Bon Accord.

29. Lindsay, Westport, Wooler, Madoc, North Gower, Peterboro, Lake Talon, Kenora, Bloomfield, Gray Hill, Hillsdown, Rossland.

30. Norquay, Croydon, Lansdowne, Woodstock, N.B., Brome, Otonabee, Lake Talon.

31. Insinger, Cartwright, Rapid City, Aurora, Wooler, Summerside, Hamilton, Madoc, Birnam, Otonabee, Peterboro, Port Hope, Agincourt, East Toronto, Lake Talon, Bloomfield, Foxleugh, Princeton, Big Creek.

FORECASTS FOR JULY, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1316. These were divided as follows:—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully.	No. Partly.	No. Not.	Per- centage.
Alberta	87	68	19	2	87.6
Saskatchewan	81	68	12	1	88.1
Manitoba	84	67	13	4	87.5
Lake Superior	122	96	17	9	85.7
Lower Lake Region	133	111	15	1	91.1
Georgian Bay	133	111	18	1	90.2
Ottawa Valley	118	96	14	8	87.1
Upper St. Lawrence	117	104	6	7	91.5
Lower St. Lawrence	109	84	16	12	81.7
Gulf	109	74	26	9	79.8
Maritime Provinces, West	111	82	23	6	84.2
Maritime Provinces, East	109	77	26	6	82.6
Total	1316	1036	205	75	86.5

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto,
4th September, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

AUGUST, 1907.

No. 8.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

A marked excess of precipitation and a very general subnormal temperature marked the weather of August throughout the greater portion of British Columbia, the only exception being in the southern part of Vancouver Island, where the precipitation was somewhat deficient and the temperature a little higher than average. The continued rains delayed the harvest somewhat. Maximum temperatures exceeding 90° were recorded at many stations, occurring at most places during the first three days.

Throughout the Western Provinces conditions were cool, and on a few occasions frost was recorded at many places. The rainfall was heavy except in Southwestern Alberta where a subnormal amount was recorded. Harvesting was well under way by the end of the month.

In Ontario fine weather predominated and the rainfall was light. The second week of the month was generally warm but otherwise conditions were cool. Pastures and root crops were much affected by drought, but the dry weather allowed the harvesting of grain in excellent condition.

In the western portion of Quebec, conditions were much the same as in Ontario, but over eastern districts, the rainfall was excessive and the weather cool.

Much cloudy, wet, cool weather prevailed during August throughout the Maritime Provinces and in consequence vegetation though of rank growth was not approaching maturity. Light local frosts were recorded in Cape Breton Island on the 22nd.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for August was subnormal throughout Canada except in Eastern Ontario, locally along Lake Huron, and over the Coast and northern districts of British Columbia where a slightly supernormal value was registered.

HIGH AREAS.

Seven areas of high pressure were charted during the month, three first appeared on the Pacific Coast well to the northward of British Columbia, two on the North Pacific United States coast and two apparently originated in the Upper Lake Region. The areas assumed the usual feeble summer type and their drift was over the Lake Region, whence some drew southwards and dispersed and others passed off either the New England or the Middle Atlantic Coasts.

LOW AREAS.

Eight areas of low pressure were sufficiently well defined to be charted. Their tracks were with one exception over the Western Provinces, thence almost in a straight line to the northern portion of the Gulf of St. Lawrence, passing far to the northward of the Lake Region and the Ottawa and St. Lawrence Valleys. The depression which deviated from the general course appeared over North Carolina and thence travelled over the Maritime Provinces into the northern portion of the Gulf of St. Lawrence. It was, however, of feeble energy as were several of those taking the northern path.

WINDS.

In British Columbia, in Vancouver and on the mainland the direction was chiefly southerly to westerly with six days with strong and eleven with fresh breezes.

In Alberta and Saskatchewan, the westerly direction slightly predominated with eleven days with strong and ten with fresh breezes and two gales.

In Manitoba the south and west winds were the most in evidence although the easterly was also well marked. There were ten days with strong and eight with fresh breezes and three gales.

In the Lake Region the direction was variable. On six days strong breezes were experienced and on nine the winds were fresh; at other times they were either light or moderate.

In the Ottawa and Upper St. Lawrence Valleys the direction was more or less variable but favouring the westerly with five days with strong and seven with fresh breezes.

In the Lower St. Lawrence Valley and the Gulf the south and west directions were the most general with ten days with strong and eleven with fresh breezes.

In the Maritime Provinces the south and west directions prevailed generally with seven days with strong and ten with fresh breezes. During the month there were a few local high winds or thunder-squalls from Ontario to the Maritime Provinces but no general gales. No warnings were issued.

TEMPERATURE.

A subnormal mean temperature was recorded throughout Canada during August, except in Southern Vancouver Island, the County of Essex and along the west shores of the Georgian Bay in Ontario, and also very locally in Quebec, where the average was slightly exceeded. Negative departures were however not excessive excepting in Alberta and Northern British Columbia where a deficiency of from 4 to 6 degrees occurred.

The Highest and Lowest temperatures in each Province during August 1907, were :

British Columbia,	98° ·3 on 1st at Alberni,	22° ·0 on 30th at Nickle Plate.
Alberta,	90° ·6 on 25th at Lethbridge,	26° ·5 on 19th at Red Willow
Saskatchewan,	94° ·0 on 13th at Meota, and on 8th at Swift Current,	28° ·0 on 21st at Kamsack.
Manitoba,	98° ·0 on 9th at Pipestone,	23° ·0 on 21st at Carberry.
Ontario,	99° ·0 on 9th at Point Clark,	24° ·0 on 16th at Clontarf.
Quebec,	87° ·9 on 11th at Montreal,	36° ·0 on 28th at Brome.
New Brunswick,	87° ·0 on 13th at Chatham,	36° ·0 on 23rd at Sussex.
Nova Scotia,	84° ·0 on 14th at Wolfville,	36° ·4 on 23rd at Sydney.
P. E. Island,	77° ·0 on 6th at Charlottetown, and on 14th at Hamilton,	46° ·0 on 19th at Summerside.

PRECIPITATION.

In the southern portions of Vancouver Island and on the Lower Mainland the rainfall was very light, less than half the average amount in many localities. In other parts of British Columbia it was nearly everywhere much in excess of the average, Cariboo recording nearly three times the usual quantity. In the Western Provinces and east as far as Lake Superior with the exception of a few localities in Southern Alberta, the rainfall was also remarkably heavy, the positive departures being equivalent to over 100 per cent at Edmonton, Swift Current and Regina; 52 per cent at Prince Albert, 57 per cent at Minnedosa, and 89 per cent at Port Arthur. The Peninsula of Ontario and the Ottawa and Upper St. Lawrence Valleys, on the other hand, suffered from the lack of rain, the drought being severely felt in nearly all the districts, the deficiency of rainfall varying from 50 to 76 per cent. In the Western portion of the Province of Quebec the rainfall was also exceedingly

light but eastward it increased steadily, reaching the average amount a little below Quebec City and exceeding it by 18 to 28 per cent in the Gaspé Peninsula; much rain also fell over the Maritime Provinces the excess from the usual quantity varying from 3 per cent in Prince Edward Island to 36 and 38 per cent in parts of Nova Scotia.

BRIGHT SUNSHINE.

A supernormal value of the mean proportion of bright sunshine for August was registered in Ontario, whilst elsewhere in Canada the amount was subnormal. The extremes of departure from average were —12 per cent of the possible amount at Winnipeg, Man., and +5 per cent at Kingston, Ont., and the maximum daily amount, 97 per cent was registered at Lindsay, Ont., on the 22nd.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, AUGUST, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	PRESSURE.			TEMPERATURE.					DIRECTION OF WIND FROM										VELOCITY OF WIND.			PRECIPITATION.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
			Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Year observed.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of day.	Mean relative humidity.	Mean amount of cloud.	No. of days completely clouded.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.	Highest days velocity.	Inches and direction from.	Amount.	Difference from average.	Inches and direction from.	No. of days with or without rain.	No. of days with or without rain.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
BRITISH COLUMBIA—																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, AUGUST, 1967.

* Stations not furnished with registering thermometers.

[illegible]

ONTARIO—Continued.

Stratford.....	43 23 31 0	1191	30 01 30 06 29 63 0 43	63 4	1 6 37 86 0	11 41 0	21 22 8	3 1	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Stony Creek.....	43 13 8 15	242	30 01 30 06 29 63 0 43	65 3	2 4 23 91 0	10 13 0	19 26 6	3 1	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Woodstock.....	43 8 80 17	980	30 01 30 06 29 63 0 43	65 3	2 4 23 91 0	10 13 0	19 26 6	3 1	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Wendell.....	42 50 3 17	577	30 01 30 06 29 63 0 43	66 5	1 5 19 88 0	12 48 0	15 22 3	77	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Windsor.....	42 50 3 17	577	30 01 30 06 29 63 0 43	66 5	1 5 19 88 0	12 48 0	15 22 3	77	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Wallaceburg.....	42 35 32 24	625	30 01 30 06 29 63 0 43	66 5	1 5 19 88 0	12 48 0	15 22 3	77	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Agincourt.....	42 35 32 24	625	30 01 30 06 29 63 0 43	66 5	1 5 19 88 0	12 48 0	15 22 3	77	1 13 5 15	11 15 28 37 26 497	11 13 NW	0 96	1 42 0 12	1 27 0 0 0
Bloomfield.....	43 47 16 16	580	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
East Toronto.....	43 59 17 21	290	30 01 30 06 29 63 0 43	65 6	9 40 0	13 45 0	28 22 7	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Kingston.....	44 13 76 29	285	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Lakeside Home.....	43 56 78 24	250	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Port Hope.....	43 56 78 24	250	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Toronto.....	43 56 78 24	250	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Bancroft.....	45 1 17 30	350	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Clontarf.....	45 23 12 9	1050	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Halliburton.....	45 1 17 30	350	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Kimmins.....	45 1 17 30	350	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Lindsay.....	44 45 58 15	572	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Lakeland.....	44 23 47 26	375	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Madoc.....	44 23 47 26	375	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
North Gower.....	45 26 55 12	601	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Ottawa.....	45 26 55 12	601	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Peterborough.....	44 20 58 18	671	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Peterboro.....	44 20 58 18	671	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Rockville.....	46 9 58 6	557	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Renfrew.....	45 26 55 12	601	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Uxbridge.....	44 51 58 18	886	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Ursa.....	44 51 58 18	886	30 01 30 06 29 63 0 43	63 9	3 2 11 90 0	13 44 5	22 27 0	3 2	1 12 11 0	7 14 18 29 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0

QUEBEC

Abitibi.....	48 43 79 22	18	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Anticosti, E. Point.....	49 21 61 32	30	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Anticosti, S. W. Point.....	49 21 61 32	30	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Bird Rocks.....	49 52 61 32	30	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Bicquet.....	48 25 68 53	45	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Brome.....	48 25 68 53	45	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Charlevoix.....	48 25 68 53	45	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Chicoutimi.....	48 25 68 53	45	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Cape Chatte.....	49 16 65 15	93	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Cape Magdalen.....	49 16 65 15	93	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Father Point.....	48 31 68 19	187	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Montreal.....	45 30 73 35	187	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Paspé.....	48 2 75 2	163	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Porte.....	48 31 64 12	80	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Quebec.....	46 48 71 13	246	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Sherbrooke.....	45 32 72 5	246	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Ste. Anne de Bellevue.....	45 32 72 5	246	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Shawinigan Falls.....	45 32 72 5	246	30 01 30 06 29 63 0 43	68 5	1 4 11 83 0	10 40 0	27 15 6	7 10	4 0 0	12 15 15 11 18 8 1 43	11 13 NW	0 83	1 14 0 47	2 25 0 0 0

NEW BRUNSWICK—

Bathurst.....	40 39 63 42	21	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Chatham.....	47 3 63 29	39	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Dieppe.....	48 1 64 22	39	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Fredericton.....	45 57 66 36	164	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Grand Manan.....	46 9 61 15	50	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Moncton.....	46 9 61 15	50	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Point Lepreau.....	45 17 69 1	70	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
St. John.....	45 17 69 1	70	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
St. Stephen.....	45 17 69 1	70	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Sussex.....	45 17 69 1	70	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0
Woodstock.....	46 8 67 42	69	30 01 30 06 29 63 0 43	63 8	0 5 33 87 0	13 45 0	27 20 3	5 3	3 2 1	1 19 22 16 1 62	11 13 NW	0 83	1 14 0 47	2 25 0 0 0

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING AUGUST, 1907.

STATION.	RAINFALL.					SNOWFALL.				REMARKS.
	Amount in inches	No. of Days, 01, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days, in Month	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA										
Coomitlam.....				in.		in.		in.		
Denman Island.....	1.11	8	23	0.47	11					
Goldstream Lake.....	0.65	9	22	0.23	7-25					
Hartley Bay.....	1.41	11	20	0.40	22					
Naas Harbour.....	7.68	16	15	1.53	27					
Nanaimo.....	0.53	3	26	0.31	6					
Royal Oak.....	0.35	3	28	0.26	25					
Swanson Bay.....	7.86	19	12	1.05	12					
Somas River.....	0.95	5	26	0.48	25					Thunder 25th.
ALBERTA—										
Bardo.....	1.68	6	23	1.20	26					
Beaver Hills, W.....	1.61	8	17	1.61	26					White frost 19th, 31st.
Bismark.....	3.99	12	18	1.03	25					Thunder 6th, 7.
Bruderheim.....	3.30	8	22	1.70	26					
Bittern Lake.....	5.52	11	20	1.23	14					Thunder 5th, 11, 13, 14. Au-
Count's.....	0.50	6	25	0.20	30					roro 19th, 30. Frost 31st.
Clover Bar.....	3.25	4	26	1.20	25					Thunder 2nd.
Conjuring Creek.....	5.08	6	21	2.22	26					
Dorence.....	1.63	8	20	1.88	18					
Grassy Lake.....	0.20	1	30	0.20	9					
Heather Brae.....	5.11	13	18	1.28	26					Frost 31st.
Islay.....										
Innisfail.....										
Josephburg.....	1.53	8	23	0.38	11					
Jumping Pound.....	4.97	11	16	1.64	9					Thunder 5th, 11. Trace of
Kimball.....	1.74	8	21	0.14	9					snow on 17th.
Lacombe.....	4.16	5	23	1.79	25					Thunder 9th, 10.
Leavings.....	2.37	7	21	0.70	8					
Macleod.....	3.72	9	20	0.70	9					Thunder 2nd, 5, 10, 11, 21.
Magrath.....	1.03	8	23	0.31	25					Frost 18th.
Mayton.....	3.75	4	26	1.56	26					
Morinville.....	2.85	5	26	0.75	18					
Okotoks.....	3.30	12	13	1.16	19					Thunder 2nd, 3, 5, 10, 11, 14
Ponoka.....	4.65	1	22	1.89	18					Ice 17th on 19th.
Sion.....	3.43	17	13	1.18	25					Aurora 1st, 30, 31.
Stirling.....										
Saddle Lake.....	1.91	1	27	2.06	15					
Vermilion.....										
Wabamun.....	4.20	8	20	1.46	25					Frost 19th.
SASKATCHEWAN—										
Arcola.....	2.14	7	21	0.98	11					
Elm How.....	3.24	8	23	0.95	30					Thunder 5th, 8.
Hanley.....	2.98	7	22	0.95	15					Slight frost on 1st.
Ininger.....	2.20	7	23	0.73	26					Hard frost 20th.
Last Mountain.....	5.48	10	20	2.53	31					Thunder 8th, 15.
Regina.....										
MANITOBA—										
Beaver.....	5.81	11	20	1.92	11					
Cartwright.....	3.83	7	23	1.69	26					
Gretna.....	2.23	6	23	0.65	26					Thunder 10th, 14. White
Norquay.....	2.83	10	21	1.15	11					frost 3rd, 20, 21.
Rapid City.....	5.56	11	20	3.25	10					Thunder 5th, 6, 8, 9, 11, 11,
Rosebank.....										15, 25, 31.
ONTARIO—										
Aurora.....	0.88	3	28	0.39	16					Thunder 1st.
Arden.....	1.28	7	20	0.51	17					Thunder 2nd, 8, 13, 17.
Croydon.....	0.95	5	26	0.30	27					Thunder 7th.
Deer Park.....	1.12	3	28	0.70	2					Thunder 2nd, 15.
Dutton.....	1.36	3	27	0.55	3					Thunder 17th.
Emsdale.....	1.77	8	12	0.33	17					Thunder 1st, 7, 21.
Ennismore.....	1.89	1	27	1.10	16					Thunder 1th.
Goderich.....	0.31	3	28	0.20	27					
Georgetown.....	1.04	5	23	0.39	2					Thunder 1st, 2, 16.
Huntsville.....	1.93	6	25	0.52	16					Thunder 7th, 16, 21.
Lansdowne.....	0.59	1	26	0.59	7					Thunder 1th.
MacCue.....	2.07	6	21	0.86	7					
Midland.....	1.28	6	25	0.46	26					Thunder 2nd.
Montague.....	0.25	3	28	0.18	30					
Orangeville.....	0.97	2	29	0.51	16					
Princeton.....	0.70	3	28	0.35	16					
Sydenham.....	3.32	6	25	2.15	7					
Strathroy.....	1.10	5	26	0.40	3					Thunder 16th. Hailstorm 1st
Watford.....	1.86	5	26	0.80	16					
Westport.....	1.41	3	28	1.27	7					Thunder 7th.
Wooler.....	1.69	3	28	0.66	16					Thunder 7th.
Westminster.....	0.32	1	27	0.32	3					Thunder 1st.
Warton.....	0.38	8	23	0.23	16					Thunder 16th.
NEW BRUNSWICK—										
Point Esequimaie.....	6.06	12	18	3.11	25					Thunder 13th, 18.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF AUGUST, 1907.

STATIONS	HOURS ENDING															
	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria		0.00	0.25	0.51	0.57	0.66	0.71	0.70	0.69	0.72	0.61	0.42	0.61	0.49	0.04	
Nanaimo		0.05	0.49	0.57	0.65	0.63	0.72	0.67	0.59	0.58	0.62	0.62	0.61	0.70	0.17	
Agassiz		0.00	0.06	0.28	0.42	0.45	0.41	0.49	0.46	0.51	0.53	0.47	0.39	0.16	0.03	
Kamloops		0.11	0.45	0.56	0.56	0.60	0.68	0.61	0.63	0.67	0.59	0.43	0.41	0.33	0.07	
Savonas																
Calgary		0.24	0.44	0.50	0.58	0.61	0.65	0.62	0.65	0.60	0.55	0.51	0.33	0.48	0.11	
Medicine Hat																
Edmonton		0.20	0.52	0.52	0.57	0.57	0.62	0.62	0.52	0.57	0.58	0.57	0.69	0.50	0.16	
Battleford																
Indian Head		0.02	0.32	0.63	0.65	0.68	0.66	0.66	0.65	0.69	0.61	0.58	0.57	0.15	0.05	
Brandon		0.4	0.06	0.34	0.56	0.60	0.50	0.58	0.61	0.66	0.63	0.68	0.60	0.55	0.11	
Winnipeg		0.10	0.32	0.45	0.46	0.49	0.53	0.51	0.55	0.66	0.65	0.62	0.54	0.17	0.14	
Woodstock		0.01	0.43	0.62	0.60	0.7	0.82	0.86	0.83	0.85	0.76	0.75	0.72	0.56	0.09	
Toronto		0.00	0.38	0.77	0.79	0.7	0.79	0.80	0.79	0.78	0.74	0.66	0.67	0.48	0.00	
Lindsay		0.14	0.42	0.50	0.61	0.60	0.62	0.61	0.61	0.55	0.60	0.45	0.52	0.56	0.36	
Barrie		0.11	0.45	0.63	0.65	0.70	0.71	0.73	0.68	0.60	0.78	0.71	0.61	0.47	0.05	
Gravenhurst	0.01	0.21	0.23	0.60	0.76	0.80	0.77	0.71	0.70	0.72	0.61	0.40	0.19	0.04	0.00	
Haileybury		0.14	0.39	0.55	0.60	0.58	0.57	0.62	0.57	0.66	0.59	0.47	0.48	0.45	0.23	0.00
Kingston		0.26	0.66	0.72	0.75	0.75	0.79	0.79	0.75	0.71	0.69	0.61	0.50	0.45	0.06	
Ottawa		0.08	0.50	0.53	0.57	0.61	0.60	0.68	0.73	0.73	0.75	0.72	0.70	0.50	0.01	
Montreal		0.01	0.31	0.58	0.63	0.63	0.66	0.61	0.55	0.56	0.53	0.48	0.33	0.04	0.00	
Sherbrooke		0.12	0.43	0.57	0.57	0.68	0.66	0.67	0.75	0.60	0.60	0.52	0.49	0.40	0.11	
Quebec		0.03	0.28	0.50	0.57	0.59	0.59	0.59	0.48	0.46	0.35	0.34	0.33	0.31	0.05	
Fredericton		0.07	0.29	0.41	0.50	0.50	0.67	0.68	0.70	0.72	0.60	0.50	0.46	0.39	0.14	
Charlottetown		0.15	0.36	0.40	0.47	0.59	0.63	0.65	0.66	0.63	0.68	0.67	0.61	0.46	0.13	

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savonas.	Calgary.	Medicine Hat.	Edmonton.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month <i>Constant sunshine being 1</i>	0.50	0.33	0.31	0.46		0.47	0.48		0.47	0.46	0.45	0.62	0.69	0.52	0.57	0.48	0.49	0.61	0.56	0.48	0.51	0.38	0.48	0.50	
Difference from average		0.09	0.02						0.02	0.08	0.12	0.07	0.02	0.02	0.06			0.05	0.03	0.00					
Maximum daily amount.	0.84	0.31	0.78	0.88		0.94	0.89		0.80	0.81	0.89	0.87	0.84	0.95	0.89	0.77	0.94	0.94	0.88	0.94	0.85	0.85	0.83	0.94	
Date.	30	31	20	23		24	20		21	21	21	26	25	22	11	9	12	9	18	8	18	27	9	15	15
No. of days completely clouded	0	0	10	3		6	5		4	4	4	3	4	4	4	4	0	0	0	2	4	4	4	1	

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Sion, Waitefield IV, Foxleigh, Brownhill II, St. Albans IV.
2. Waitefield III, Gray Hill III, Hillsdown III, Foxleigh, Brownhill IV, Chaplin IV, Meota III.
3. Kneehill, Estevan, Kenora IV.
4. Chaplin IV.
6. Gray Hill IV, St. Albans II.
7. Haliburton.
8. Kenora II.
12. Brownhill IV.
15. St. Albans IV.
18. St. Albans IV.
19. Bruederheim, St. Albans IV.
20. Waitefield II, Gray Hill II, Hillsdown IV, Foxleigh, Chaplin IV, Meota II, St. Albans I, Kenora IV, Shawenegan Falls II.
26. Meota, I.
29. Bala.
30. Bruederheim, Sion, Waitefield II, Gray Hill III, Hillsdown IV, Estevan II, Shawenegan Falls IV.
31. Sion, Waitefield III, Gray Hill IV, Waseca, Foxleigh, Meota IV.

Thunder recorded on :

1. Westminster, Georgetown, Emsdale, Aurora, Rossland, Princeton, B. C., Summerland, Quesnel, Nicola, Port Dover, Hamilton, Brantford, Birnam, Sutton West, Owen Sound, Meaford, Lucknow, Cockburn Island, Bruce Mines, Brome, Chicoutimi, Paspebiac.
2. Coutts, Leavings, Okotoks, Georgetown, Midland, Deer Park, Salmon Arm, Rossland, Quesnel, Tobacco Plains, Nicola, Pekisko, Brantford, Birnam, Peterboro, Otonabee, Madoc, Sutton West, Owen Sound, Brome.
3. Okotoks, Waitefield, Salmon Arm, Nicola, Golden, Big Creek, Crawford Bay, Pekisko, Gray Hill, Alix, Kneehill, Macleod, Gatesgarth, Chaplin, Brantford, Clarke City.
4. Rapid City, Ennismore, Quesnel, Red Willow, Gray Hill, Humboldt, Alameda, Almasippi, Morden, Oakbank.
5. Jumping Pound, Leavings, Okotoks, Elm How, Norquay, Big Creek, Red Willow, Bon Accord, High River, Gatesgarth, Almasippi, Oakbank, Paris, Birnam, Cockburn Island, Bruce Mines, Kenora.
6. Norquay, Bon Accord, Lake Talon, Bruce Mines.
7. Bruederheim, Wooler, Lansdowne, Emsdale, Croydon, Westport, Huntsville, Waitefield, Big Creek, Pakan, Bon Accord, Chaplin, Peterboro, Otonabee, North Bruce, Madoc, Haliburton, Port Hope, B. atrice, Uplands, Sutton West, Bala, Copper Cliff, Brome, Chicoutimi, Shawenegan Falls.
8. Last Mountain, Elm How, Norquay, Big Creek, Indian Head, Gatesgarth, Estevan, Chaplin, Almasippi, Morden, Oakbank, St. Albans, Clarke City, Wolfville, Windsor, N.S.
9. Kinball, Norquay, Rapid City, Rossland, Princeton, B.C., Alberni, Foxleigh, Alameda, Gatesgarth, Chaplin, Oakdale Park.
10. Kimball, Leavings, Okotoks, Gretna, Rapid City, Salmon Arm, Rossland, Tobacco Plains, Gray Hill, High River, Foxleigh, Estevan, Almasippi, Carberry, Oakbank, St. Albans, Kenora.
11. Jumping Pound, Bruederheim, Leavings, Okotoks, Norquay, Salmon Arm, Tobacco Plains, Pakan, Gray Hill, High River, Almasippi, Owen Sound, Bruce Mines, Point Lepreaux.
12. Waitefield, Pakan, Foxleigh, Madoc, Brome, Chicoutimi, Clarke City, Summerside, St. Stephen.
13. Bruederheim, Rapid City, Point Escuminac, Foxleigh, Carberry, Oakdale Park, Summerside, Sussex, Channel.
14. Bruederheim, Okotoks, Gretna, Norquay, Waitefield, Pakan, Red Willow, High River, Chaplin, Meota, Almasippi, Carberry, Morden, Wolfville, Windsor, N.S.
15. Last Mountain, Norquay, Deer Park, Bon Accord, Foxleigh, Meota, Almasippi, Carberry, Birman, Cockburn Island, Bruce Mines, Kenora.
16. Georgetown, Strathroy, Huntsville, Foxleigh, Chaplin, Brantford, Madoc, Point Clark, Owen Sound, Lucknow.

17. Dutton, Rossland, Foxleigh, Sutton West, Chicoutimi, St. Stephen.
18. Point Escomirac.
19. Red Willow, Bon Accord, Gray Hill, Hillsdown.
20. Quesnel, Big Creek.
22. Pakan, Meota, Almasippi, Oakbank.
23. Nicola, Clontarf, Cockburn, Bruce Mines.
24. Leavings, Emsdale, Huntsville, Salmon Arm, Rossland, Princeton, B.C., Nicola, Big Creek, Hedley, Pekisko, Otonabee, Madoc, Haliburton, Beatrice, Uplands, Lake Talon, Bala, Copper Cliff, Shawenegan Falls.
25. Somas River, Norquay, Alberni, Pakan, St. Albans, Windsor, N.S.
26. Rapid City, Almasippi, Cape Magdalen, Wolfville, E. Pt. Sable Island.
28. Brome.
29. Rossland, Princeton, B.C., Summerland, Quesnel, Foxleigh.
30. Rapid City, Foxleigh, Alameda, Estevan, Chaplin, Almasippi, Carberry, St. Albans.
31. Norquay, Chaplin, Oakbank.

FORECASTS FOR AUGUST, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1396. These were divided as follows:—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	88	61	22	5	81.8
Saskatchewan	87	67	17	3	86.8
Manitoba	91	73	10	7	86.7
Lake Superior	132	90	30	3	86.4
Lower Lake Region	138	110	25	3	88.8
Georgian Bay	138	112	25	1	90.2
Ottawa Valley.	115	97	15	3	90.0
Upper St. Lawrence	116	95	17	3	90.0
Lower St. Lawrence	117	80	23	6	85.5
Gulf.	118	96	18	1	89.0
Maritime Provinces, West	120	102	23	1	88.0
Maritime Provinces, East.	120	98	28	3	86.8
Total	1396	1160	252	15	87.7

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto,
18th October, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

SEPTEMBER, 1907.

No. 9.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather on the Islands and lower mainland of British Columbia was somewhat warmer than usual. High temperatures continued up to the 11th when the weather turned cooler and continued so almost to the end of the month, a warmer period from the 21st to 25th only intervening. Dry weather occurred on Vancouver Island, also in some districts in other portions of the province. The chief wet periods were the 2nd to 6th, 11th, 12th, 15th to 17th, 27th and 30th. Much bright sunshine was recorded during the first two weeks, also from the 20th to 24th, but the proportion for the month was a little less than the average. On the upper mainland the weather was warmer than usual excepting in a few places in the district of Cariboo where it was slightly cooler. Quite warm weather was recorded during the first eight or nine days, also from the 21st to 26th. The proportion of bright sunshine slightly exceeded the average and there was much fine weather from the 6th to 13th, also after the 19th. At Rossland snow was recorded on the 12th.

In the Province of Alberta the weather was quite cool in the southern and eastern portions, but elsewhere the mean temperature at most places was either average or slightly above. In most localities after the 9th frosts were frequent and 11° was recorded at High River on the 13th. Such low temperatures occurring at night were generally followed by mild days. Fine bright weather was frequent during the first nine days, also from the 17th to 30th. The precipitation which included some snow on or about the 11th and which was excessive in the aggregate occurred chiefly on or about the 2nd, 5th, occasionally from the 10th to 18th and on the 27th. On the 30th many plants were still in bloom.

In Saskatchewan the weather was unusually cool, the temperature after the 6th seldom exceeding 65 and frosts at night occurring occasionally. Much bright sunshine was recorded throughout the greater portion of the month and the precipitation which was light in most districts, was recorded generally on or about the 8th, 11th, 13th, 17th, 22nd and 28th.

The weather in Manitoba was quite cool and although the temperature after the 6th occasionally rose above 60° it was mostly below this, and frosts at night were frequent after the 20th. The precipitation which was recorded chiefly on or about the 7th, 12th, 13th, 23rd and 27th was unusually light. Much fine weather occurred between the 1st and 10th, 14th and 21st and 24th and 30th, the proportion of bright sunshine being somewhat above the average.

The weather in the Peninsula of Ontario was slightly warmer than usual, whilst elsewhere the mean temperature was somewhat below the average. On or about the 23rd there was a marked fall in the temperature and the weather continued cool to the end of the month, frosts being recorded occasionally at some places during this period. With a few quite local exceptions the rainfall was excessive, the chief falls recorded occurring on or about the 1st, 4th to 6th, 10th, 11th, 17th to 20th, 24th, 25th and occasionally from the 27th to 30th. Some fine weather occurred during the month, but the proportion of bright sunshine was much below the average. The condition of vegetation on the 30th was normal.

In the Province of Quebec the weather was somewhat cooler than usual and after the 17th quite cool weather prevailed. On the last three or four days of the month frosts were recorded at many places. In most districts the precipitation exceeded the average, and rain was frequent in the eastern part on or about the 1st, 3d to 9th, 12th to 18th, 21st and 24th to 26th. In western counties the chief wet periods were the 3d to 7th, 10th to 12th, 16th, 17th, 21st, 24th and 30th. Dull weather prevailed and the proportion of bright sunshine was below the average.

In New Brunswick the mean temperature did not depart much from the normal, but the weather was slightly cooler than usual and frosts were recorded at many places on or about the 19th and 29th. Dull unsettled weather was general during the first twelve days, after which much finer weather prevailed. The dates of precipitation were 1th to 6th, 8th, 9th, 11th, 16th, 17th, 21st, 24th, 26th and 30th, these dates agreeing at most stations. The total fall was considerably in excess of the average. Thunderstorms were reported on the 6th and 17th and gales on the 24th and 29th, the latter gale being heavy in the Bay of Fundy. On the 30th vegetation was still quite green and showed no sign of withering.

The weather in Nova Scotia was somewhat cool at most places, but at Sydney and Truro on the contrary the mean temperature was slightly above the average. Quite high temperatures occurred on the 13th and 16th and they were quite low on the last two days, but with these exceptions there were very few marked changes during the month. In southern districts the weather was finer than in the northern portion where it was somewhat dull. Precipitation occurred chiefly about the 1st to 9th, 17th, 22nd to 26th and 30th. Gales were recorded on the 25th and 30th.

In Prince Edward Island the weather did not depart much from the normal excepting in the amount of the precipitation which was quite excessive. The falls recorded occurred at Charlottetown on fourteen days and the dates elsewhere, which varied with the district, showed a similar frequency. Thunderstorms were reported on the 6th and 27th. The condition of vegetation was normal.

F. F. PAVNE.

ATMOSPHERIC PRESSURE.

The mean atmospheric pressure for September exceeded the average west of Lake Superior, also in the Gaspé Peninsula and in Cape Breton, whilst elsewhere in Canada a subnormal value was registered. The range of departure from normal was 0.18 of an inch, the extremes being -0.10 of an inch at Calgary, Alta, and -0.08 of an inch at Toronto, Ont.

HIGH AREAS.

Eight areas of high barometric pressure were charted during September, the majority pursuing a southeasterly path from the Yukon to the Middle Atlantic States. Few of the systems were very pronounced in character, but most of them were accompanied by cool weather, more particularly throughout Western Provinces.

LOW AREAS.

Nine cyclonic systems were charted during September, and all passed out of the field of observation north of the 40th parallel. These areas of low barometric pressure were first observed between the North Pacific States and the Yukon Territory and the general course pursued was in a southeasterly and easterly direction to the Gulf of St. Lawrence. As a general rule the areas increased rapidly in energy as they progressed eastward, and were accompanied by gales.

During the latter half of the month when the majority of the areas were passing in quick succession over Eastern Canada the weather was very stormy in the Gulf of St. Lawrence.

WINDS.

In British Columbia, on Vancouver Island and over the mainland the direction was largely variable favouring somewhat the south and west. There were four days with strong and eight with fresh breezes.

In Alberta and Saskatchewan, the direction was variable with ten days with strong and nine with fresh breezes.

In Manitoba the north and west directions were most in evidence with seven days with strong and ten with fresh breezes and one gale.

In the Lake Region the south and west directions were the most general although the north and east were well marked. There were four days with strong and eleven with fresh breezes and four gales, the latter occurring between the 11th and 12th, on the 20th and 21st and the 28th.

In the Ottawa and Upper St. Lawrence Valleys the direction was variable, being very evenly distributed between all quarters. There were seven days with strong and ten with fresh breezes and one gale.

In the Lower St. Lawrence Valley and the Gulf of St. Lawrence, the direction was variable with fourteen days with strong and seven with fresh breezes and two gales, the latter occurring between the 17th and 18th and on the 25th.

In the Maritime Provinces the direction was variable with nine days with strong and eleven with fresh breezes and two gales, the latter occurring between the 24th and 25th and between the 29th and 30th.

The gales were satisfactorily warned with the exception that no warning was issued for Lakes Erie and Ontario for the storm of the 11th and 12th and a warning forwarded to River and Bay stations on the 20th, was not justified by subsequent dangerous winds.

TEMPERATURE.

In British Columbia, exclusive of Cariboo, the temperature was above the average by from 1 to 3 degrees. In the Peninsula of Ontario it was above the average by an equal amount, but over the large remaining portion of the Dominion a negative departure occurred, except in one or two isolated localities where the average was just maintained. The chief negative departure, amounting to 3 degrees, was experienced in Saskatchewan and Alberta, elsewhere the departure was usually from 1 to 2 degrees.

The Highest and Lowest temperatures in each Province during September, 1907, were :

British Columbia,	89° on 8th at North Nicomen,	16° on 17th at Fort St. James.
Alberta,	91° on 2nd at Medicine Hat,	11° on 13th at High River.
Saskatchewan,	83° on 6th at Moose Jaw,	10° on 29th at Foxleigh.
Manitoba,	86° on 1st at Birtle,	12° on 27th at Carberry.
Ontario,	{ 89° on 21st at Point Clark, and 89° on 15th at Stony Creek.	{ 23° on 27th at Port Arthur.
Quebec,	83° on 15th at St. Anne de Bellevue,	25° on 28th at Chicoutimi,
New Brunswick,	{ 79° on 5th at Sussex, and 77° on 15th at St. Stephen,	{ 29° on 19th at Sussex and St. Stephen.
Nova Scotia,	80° on 13th at Wolfville,	29° on 29th at Truro.
P. E. Island.	74° on 13th at Hamilton,	35° on 28th at Summerside.

PRECIPITATION.

In British Columbia at Victoria, on Vancouver Island, the rainfall was 45 per cent below the usual amount, but on the mainland it was above the average, the excess varying from 3 per cent in Cariboo to 100 per cent in more southern districts. In the Western Provinces Calgary recorded an excess of precipitation of over 100 per cent, but all other localities gave a deficiency ranging from 8 per cent at Battleford to 47 per cent at Swift Current, and 67 per cent at Winnipeg. In Ontario, at Parry Sound, the rainfall was 29 per cent less than the usual amount, and at Southampton it was the average, but all other localities recorded a positive departure, which in several districts was as much as from 60 to 80 per cent. In Quebec the rainfall was above the average and nearly everywhere by about 25 per cent. In the Maritime Provinces Sydney recorded a deficiency of 35 per cent, whilst elsewhere there was a positive departure, the chief departures being St. John, 41 per cent, Chatham, 48 per cent, and Fredericton 59 per cent.

BRIGHT SUNSHINE.

From Ontario to the Maritime Provinces the hours of bright sunshine recorded were less than average, the deficiency ranging from 17 to 21 per cent of the possible. From Manitoba westward sunshine was on the contrary a little in excess of the average, except near the coast where it was about equal to the average.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, SEPTEMBER, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.			TEMPERATURE.					No. of days completely clouded.	DIRECTION OF WIND FROM								VELOCITY OF WIND.				Precipitation.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Highest.	Date.		Lowest.	Date.	Mean daily range.	Mean relative humidity.	Mean amount of cloud.	DIRECTION OF WIND FROM								Total number of observations.	Mean miles per hour.	H. (24-hr. day) actually.	Less wind direct from train.	Average.	H. (24-hr. day) actually.	Less wind direct from train.	Average.	Precipitation.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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ALBERTA—	54	45	113	17	1650	47.0	-278.0	2.9	26.0	17.22.9	2.30	0.49	9.21	0.1	1.1
Athabasca Landing	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Armstrong	51	10	115	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Blackfalds	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Barrhead	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Barrhead	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Calgary (Ex. Stn.)	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Calgary	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Carleton	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Clatskanie	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Edmonton	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Edmonton	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Fort Vermilion	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Fort Hill	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Gleichen	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Gleichen	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Hillsdown	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
High River	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Knecht	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Leppington	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Lethbridge	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Lethbridge	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Medicine Hat	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Medicine Hat	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Nanton	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Parker Creek	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Parksville	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Parksville	51	21	114	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Red Deer	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Red Deer	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Theriot Creek	51	30	113	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Theriot Creek	51	30	113	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Tyler	51	30	113	11	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3
Wetaskiwin	52	20	113	10	1512	30.01	30.01	30.01	30.01	30.01	2.30	1.13	0.60	12.17	0.3

* Stations not furnished with Registering Thermometers, a barometer not reduced to Sea Level.

[illegible]

ONTARIO—Continued.

Stratford	13 23	81 0	1191	58.9	+ 0.5 12.81.0	15 34.0	30 17.1	4 4	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.80 + 1.66 1.87	6.24 0 0 0
Stony Creek	13 13	79 45	232	63.1	+ 0.9 22.89.0	15 39.0	23 17.6	4 2	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	2.96 - 0.15 0.96	6.24 0 0 0
Windsor	13 8	79 47	271	63.1	+ 0.2 23.82.0	15 35.0	23 18.1	6 3	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.45 - 0.12 1.22	11.16 0 0 0
Windsor	12 59	81 71	577	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	5.49 + 2.12 1.35	11.18 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.42 + 2.02 1.41	11.19 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.50 + 1.72 1.29	3.25 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.56 - 1.17 1.02	10.20 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.71 - 1.45 9.20	0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.19 + 0.49 1.42	13.11 1 2 2
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.76 + 0.70 1.92	7.23 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.80 + 0.67 1.71	13.12 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	5.11 - 1.01 2.37	6.21 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	4.26 - 1.33 1.35	7.23 0 0 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.17 - 1.24 1.81	9.21 1 3 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	1.18 - 1.60 1.18	17.13 0 7 3
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	5.01 - 1.49 12.19	1 5 1
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.95 - 1.23 1.77	16.13 0 3 0
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	2.45 - 0.21 1.17	8.22 0 0 1
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	2.82 - 0.23 0.33	16.11 0 0 6
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	3.61 - 0.23 0.33	16.11 0 0 6
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	4.11 - 1.22 1.43	16.11 0 0 6
Windsor	12 59	81 71	625	62.7	+ 1.2 21.83.0	20 37.0	26 15.8	2 17	0 1	3 22	17 9	4 35	4 20	0 90	0 90	180	92	18.5	24 SW	5.30 - 1.30 9.21	0 0 0

QUEBEC—

Abitibi	18 43	79 22	18	50.9	- 1.7 12.76.0	11 26.0	28 15.7	6 9	18 12	8 2	17 8	16 9	0 90	0 90	180	92	18.5	24 SW	3.82 - 1.41 2.16	12.15 0 0 0
Anticosti, E. Point	19 52	61 12	30	49.3	+ 0.9 26.63.0	10 36.0	19 20	5 6	11 5	11 8	17 3	11 21	0 90	0 90	180	92	18.5	24 SW	1.78 - 0.91 0.61	10.20 0 0 3
Anticosti, W. Point	19 52	61 12	30	49.3	+ 0.9 26.63.0	10 36.0	19 20	5 6	11 5	11 8	17 3	11 21	0 90	0 90	180	92	18.5	24 SW	3.42 - 1.51 1.68	12.18 0 0 1
Anticosti, S. W. Point	19 52	61 12	30	49.3	+ 0.9 26.63.0	10 36.0	19 20	5 6	11 5	11 8	17 3	11 21	0 90	0 90	180	92	18.5	24 SW	3.08 - 1.51 1.30	11.16 0 0 6
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	1.05 - 0.39 1.00	10.20 0 0 8
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	2.82 - 0.19 1.00	10.20 0 0 8
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	1.43 - 0.67 0.32	12.17 2 0 0
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	2.16 - 1.07 0.61	11.19 0 0 4
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	3.54 - 0.43 1.62	11.17 0 0 4
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	1.15 - 0.80 0.76	11.17 0 0 4
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	6.76 - 1.07 1.17	12.16 0 0 2
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	1.03 - 0.91 0.89	11.13 2 2 0
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	5.77 - 1.07 1.17	12.16 0 0 0
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	5.77 - 1.07 1.17	12.16 0 0 0
Brome	17 51	61 12	18	46.5	+ 0.6 26.57.0	9 35.0	28	3 35	0 0	1 9	12 17	13 90	0 90	0 90	180	92	18.5	24 SW	5.77 - 1.07 1.17	12.16 0 0 0

NEW BRUNSWICK—

Bathurst.....	40 39	65 42	21	30.0	30.11.29	11.1.00	56.1	- 0.5 33.78.0	21	30.0	29.18.5	6	2	13	3	0	11	13	11	1	60	1	30	1	13.0.88	11.01 0 1 0	
Ciatham.....	47 3	65 29	38	161	51.5	+ 1.0 33.78.0	12	35.0	18 27.16.1	1	0	11	0	0	1	10	2	2	0	30	0	30	0	1.46 1.62	9.20 0 0 0		
Dalhousie.....	48 4	65 29	38	161	51.5	+ 1.0 33.78.0	12	35.0	18 27.16.1	1	0	11	0	0	1	10	2	2	0	30	0	30	0	1.46 1.62	9.20 0 0 0		
Fredricton.....	45 57	66 36	161	30.02	30.12.29	18.0.95	57.6	- 0.6 31.78.0	21	31.5	19.17.3	6	8	11	9	13	6	18	9	20	3	160	16.9	13.7.26 W	1.52.39 13.11 0 0 0		
Grand Manan.....	41 47	66 16	109	30.00	31.35.29	17.0.88	57.2	- 0.6 23.76.6	21	41.8	28.12.3	2	1	3	3	1	16	15	9	1	60	0	0	1.77 0.77	13.11 0 3 1		
Moncton.....	46 9	64 15	30	.....	.....	.....	53.6	- 10.71.0	12	31.0	28.12.3	5	6	12	1	0	25	11	12	0	75	10	IV 25 SW	5.78 - 2.74	10.20 0 0 1
*Point Lepreaux.....	45 4	66 28	30	53.6	- 0.9 29.65.0	12	40.0	18	6	9	5	6	12	1	0	25	11	12	0	75	10	IV 25 SW	3.68 - 0.63 1.83	13.11 0 0 1
St. John.....	45 17	64 14	30	30.02	30.11.29	50.0.91	53.9	+ 0.2 31.69.3	19	35.0	19.20.8	15	3	5	6	11	4	8	0	5	60	0	5	1.83 - 1.16 1.26	13.13 0 2 8		
St. Stephen.....	45 11	67 16	35	.....	.....	.....	56.0	+ 0.2 10.79.0	15	29.0	19.20.8	0	2	1	0	1	14	3	5	1	30	0	0	1.56 - 1.12 2.73	7.25 0 0 1
Sherbrooke.....	43 38	65 38	49	.....	.....	.....	51.8	- 0.5 10.79.0	5	29.0	19.20.2	0	2	1	0	1	14	3	5	1	30	0	0	5.21 - 2.38 3.61	12.18 0 0 1
Woodstock.....	46 8	67 42	

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING SEPTEMBER, 1907.

STATION.	RAIN FALL					SNOW FALL					REMARKS.
	Amount in inches	No. of Days, of, or Over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days, in Month	Heaviest Fall in Month	Date		
BRITISH COLUMBIA											
Cootnam...	1.45	3	27	1.20							
Denman Island...	2.32	8	22	0.93	16						
Goldstream Lake...	1.61	10	20	0.83	16						
Hartley Bay...	1.06	8	22	1.00							
Naas Harbour...	1.55	11	19	1.41	21						Fog 23.
Nanaimo...	2.74	4	22	1.96	16						
Royal Oak...	1.19	6	24	0.41	16						
Sonias River...	1.95	5	24	0.89	16						
Swanson Bay...	6.75	7	23	3.06	28						
ALBERTA—											
Bardo...	3.29	5	24	1.31	9	1.5	4	1.5	17		
Beaver Hills, W...	1.50	3	22	1.06	10		2	1.0	10, 17		
Bismark...	2.01	6	23	0.57	10	3.5	5	3.5	17		
Bruderheim...	1.32	5	22	0.95	11	1.0	1	1.0	16		Thunder 2nd, 11
Bittern Lake...	1.78	6	22	0.77	10	1.6	2	1.4	16		Thunder 2nd.
Count's...	2.25	6	21	0.50	12	1.2	3	6.0	11		Thunder 10th.
Clover Bar...											
Conjuring Creek...	1.81	3	26	1.31	10	3.0	1	3.0	21		
Dorence...	1.55	4	24	1.08	11	3.0	3	3.0	17		
Grassy Lake...	3.50	4	26	1.50	13						
Heather Brae...	2.26	8	20	1.10	10	2.3	3	2.3	17		Thunder 3rd, 9.
Islay...											
Innisfail...											
Josephsburg...	0.86	2	26	0.66	11	3.0		3.0	12		Thunder 2nd.
Jumping Pound...	0.50	1	19	0.31	6	15.6	2	14.9	12		
Kimball...	0.20	2	24	0.22	27	23.0	2	13.0	11		
Lacombe...	2.55	4	22	0.90	15	1.5	2	1.5	17		
Leavings...											
Macleod...	1.92	5	21	0.60	15	22.0	2	12.0	12		
Magrath...	1.56	5	23	1.03	10	22.0	2	12.0	12		
Mayton...	1.76	2	26	1.06	17						
Morinville...	0.60	3	27	0.30	10						
Okotoks...	0.27	2	20	0.15	28						Heavy snow on 10th, Thunder 10.
Ponoka...	2.28	6	22	1.03	10	3.5	2	3.0	17		
Sion...	1.47	9	19	0.72	9	0.8	3	0.8	16		Thunder 3rd, 9, auroras 12, 26, 28.
Stirling...											
Saddle Lake...	1.20	2	26	0.70	9	1.5	2	1.0	16		
Vermilion...											
Wabamun...	1.13	5	23	0.70	10	1.5	3	1.0	16		
SASKATCHEWAN—											
Arco...											
Elm How...	1.10	4	22	0.45	11		1		12		
Hanley...											
Insinger...	1.60	5	25	0.70	11	1.0	1	1.0	13		Auroras 6th, 11, 26. Thunder 10.
Last Mountain...	1.59	5	24	0.50	4		1		13		Fog 8th.
Regina...	0.70	8	17	0.23	11						Fog 21st.
MANITOBA—											
Beaver...	2.77	4	22	2.00	11						
Cartwright...	2.17	7	22	1.35	19						Auroras 4th, 10, 11.
Gretna...	1.12	6	19	0.52	13						
Norquay...	0.96	7	23	0.39	13						
Rapid City...	0.87	5	22	0.25	24		1		26		
Rosebank...											
ONTARIO—											
Aurora...	3.51	8	21	1.24	28						Thunder 1st, 5.
Arden...	6.22	13	15	1.74	20						Thunder 6th, 8, 10, 20, 24.
Croydon...	6.55	10	20	1.60	11						Thunder 11th, 12, 19, 24.
Deer Park...	1.37	7	22	1.39	11						
Dutton...	1.19	8	20	1.70	16						Thunder 1st, 16.
Emsdale...	5.11	18	9	1.61	17						Thunder 5th, 9th, 16, 20.
Ennismore...	2.08	5	23	1.12	30						Aurora 16.
Goderich...	1.73	7	23	0.40	5, 28						Thunder 24.
Georgetown...	3.65	15	12	1.02	28						Thunder 1st, 5th, 20, 28.
Huntsville...	2.96	13	17	0.55							Thunder 9th, 16, 20.
Lansdowne...	3.41	7	22	0.90	30						Thunder 20th.
Macleod...	2.61	7	22	0.51	19						
Midland...	1.06	15	12	0.45	5						Thunder 1st, 16.
Montague...	1.33	7	22	2.55	30						
Orangeville...	3.58	8	22	1.04	11						
Princeton...	1.33	6	21	1.75	11						Thunder 11th, 20.
Sydenham...	1.56	10	20	2.25	29						
Strathroy...	3.56	12	18	0.92	10						Thunder 1st, 16th, 27.
Watford...	1.26	9	21	0.92	16						
Westport...	4.14	8	22	1.30	29						
Wooler...	3.75	9	20	2.24	29						
Westminster...	2.79	7	20	0.73	10						Thunder 6th, 16.
Warton...	3.86	10	20	0.90	5						Thunder 1st, 5, 19, 23.
NEW BRUNSWICK—											
Point Escominac...	2.98	8	19	1.12	24						Fog 12th.

PROPORTION OF DIRECT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF SEPTEMBER, 1907

STATIONS	Hour Ending														
	6 a.m.	7 a.m.	8 a.m.	9 a.m.	10 a.m.	11 a.m.	Noon	1 p.m.	2 p.m.	3 p.m.	4 p.m.	5 p.m.	6 p.m.	7 p.m.	8 p.m.
Victoria			0.11	0.37	0.49	0.48	0.34	0.17	0.01	0.00	0.00	0.04	0.31	0.21	
Nanaimo			0.01	0.37	0.51	0.51	0.49	0.37	0.58	0.60	0.51	0.60	0.45	0.09	
Agassiz			0.11	0.30	0.39	0.46	0.49	0.51	0.51	0.46	0.44	0.40	0.19	0.02	
Kamloops			0.06	0.23	0.47	0.45	0.57	0.62	0.63	0.65	0.59	0.68	0.39	0.21	
Savona															
Calgary															
Medicine Hat	0.49	0.49	0.58	0.50	0.65	0.73	0.70	0.68	0.65	0.65	0.55	0.26	0.62		
Edmonton		0.01	0.39	0.50	0.58	0.63	0.63	0.63	0.59	0.65	0.59	0.47	0.09		
Battleford															
Indian Head			0.03	0.39	0.43	0.50	0.58	0.61	0.66	0.68	0.72	0.68	0.41	0.08	
Brandon		0.01	0.51	0.53	0.63	0.61	0.61	0.61	0.57	0.55	0.42	0.18	0.03		
Winnipeg		0.11	0.12	0.51	0.60	0.63	0.69	0.68	0.68	0.65	0.61	0.73	0.12		
Woodstock		0.06	0.22	0.31	0.43	0.46	0.44	0.43	0.46	0.43	0.32	0.27	0.10		
Toronto		0.01	0.27	0.41	0.57	0.61	0.66	0.68	0.64	0.67	0.57	0.35	0.08		
Lindsay		0.07	0.11	0.28	0.31	0.35	0.42	0.40	0.43	0.44	0.39	0.35	0.51	0.01	
Barrie		0.01	0.30	0.31	0.41	0.47	0.50	0.48	0.47	0.51	0.49	0.26	0.12		
Gravenhurst	0.02	0.03	0.06	0.18	0.22	0.23	0.31	0.32	0.24	0.29	0.12	0.09	0.01		
Haileybury		0.06	0.29	0.31	0.29	0.35	0.37	0.41	0.43	0.39	0.29	0.21	0.01		0.00
Kingston	0.01	0.08	0.20	0.32	0.31	0.51	0.52	0.55	0.47	0.42	0.43	0.31	0.04		
Ottawa		0.05	0.26	0.35	0.38	0.46	0.43	0.45	0.46	0.45	0.39	0.31	0.06		
Montreal		0.05	0.25	0.31	0.39	0.40	0.41	0.44	0.42	0.44	0.46	0.46	0.00		
Sherbrooke	0.01	0.06	0.22	0.26	0.50	0.58	0.51	0.44	0.43	0.42	0.39	0.31	0.06		
Quebec		0.04	0.36	0.42	0.47	0.47	0.39	0.40	0.43	0.44	0.41	0.58	0.02		
Fredericton		0.11	0.31	0.37	0.44	0.56	0.57	0.60	0.57	0.56	0.51	0.47	0.22		
Charlottetown		0.11	0.41	0.49	0.47	0.47	0.52	0.55	0.51	0.50	0.49	0.40	0.25	0.01	

	Victoria	Nanaimo	Agassiz	Kamloops	Savona	Calgary	Medicine Hat	Edmonton	Battleford	Indian Head	Brandon	Winnipeg	Woodstock	Toronto	Lindsay	Barrie	Gravenhurst	Haileybury	Kingston	Ottawa	Montreal	Sherbrooke	Quebec	Fredericton	Charlottetown
Mean proportion for month <i>Constant sun-shine being 1</i>	0.44	0.42	0.35	0.44			0.53	0.45		0.46	0.43	0.50	0.30	0.41	0.31	0.39	0.46	0.28	0.31	0.32	0.35	0.31	0.30	0.42	0.42
Difference from average	0.01		0.01							0.07	0.03	0.01	0.19	0.13	0.21	0.12			0.17	0.11	0.19			0.07	
Maximum daily amount	0.88	0.83	0.80	0.81			0.92	0.82		0.84	0.78	0.86	0.80	0.80	0.96	0.87	0.57	0.86	0.81	0.88	0.80	0.86	0.85	0.92	0.90
Date	22	23	22	8	7		9	1		30	2	26	21	12	11	21	3	18	22	22	22	22	18	18	28
No. of days completely clouded	5	5	9	3			1	0		4	3	6	11	3	5	1	17	5	1	9	9	4	10	7	6

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Fort Vermilion.
2. Fort Vermilion.
3. St. Albans, III; Kenora, III.
4. Cartwright, Chaplin, III; Alameda, IV; St. Albans, II, Fort Vermilion.
5. Meota, IV; Kenora, IV, Fort Vermilion.
6. Insinger, Waseca.
9. Salmon Arm, Chaplin, IV; Meota, IV; St. Albans, IV; Cape Magdalene.
10. Cartwright, Cape Magdalene.
11. Emsdale, Insinger, Cartwright, Big Creek, III; White Horse, III; Carcross, IV; of Meota, III; Lake Talon, Kenora, IV, Alameda.
12. Sion, Kenora, IV; Madoc, IV; Shawenegan Falls.
13. Fort Vermilion.
14. Foxleigh, St. Albans, II.
15. Fort Vermilion.
16. Chaplin, IV.
17. Chaplin, IV, Fort Vermilion.
18. Chaplin, III.
23. Waitefield, III.
25. Treherne.
26. Sion, Red Willow, Hillsdown, IV; Brownhill, II; Alameda, I; Foxleigh, St. Albans, II; Oakbank, Bruce Mines, IV; Kenora, IV; Haliburton.
27. Kneehill, Foxleigh, Treherne.
28. Sion, Red Willow, Pakan, III; Kneehill, Hillsdown, IV; Waitefield, II; Foxleigh, Brownhill, II; Chaplin, II; Meota, I; St. Albans, III; Bruce Mines, III, Fort Vermilion.
29. Kenora, IV, Fort Vermilion.
30. Big Creek, III; White Horse, II; Waitefield, IV.

Thunder recorded on :

1. Aurora, Georgetown, Midland, Strathroy, Wiarton, Crawford Bay, Summerland, Tobacco Plains, Roseland, Point Clark, Beatrice, Cockburn Island, Bruce Mines, Owen Sound, Clinton, Lucknow, Stony Creek, Madoc, Port Hope, Agincourt, Hamilton, Birnam, Paris, East Toronto, Brantford, Port Dover, Port Burwell, Brome.
2. Bruderheim, Bittern Lake, Golden, Salmon Arm, Red Willow, Blackfalds, Alix, Wetaskiwin, Waitefield, Sutton West, Josephsburg, Bon Accord.
3. Heather Brae, Sion, Waitefield, Meota, Bon Accord.
4. Stuarts Lake, Waitefield, Meota, Point Clark, Lucknow, Port Dover.
5. Aurora, Emsdale, Georgetown, Wiarton, Crawford Bay, Princeton, B.C., Summerland, Salmon Arm, Cockburn Island, Meaford, Owen Sound, Lake Talon, Orillia, Clinton, Uplands, Madoc, Agincourt, Hamilton, Birnam, Paris, East Toronto, Brantford, Port Burwell, Brome.
6. Arden, Westminster, Tobacco Plains, Macleod, Pekisko, Sutton West, Haliburton, Bon Accord.
7. Point Clark, Owen Sound, Lake Talon, Percé, Paspébiac.
8. Arden, Clinton, Birnam, Port Burwell.
9. Heather Brae, Sion, Emsdale, Huntsville, Big Creek, Red Willow, Pakan, Wetaskiwin, Waitefield, Beatrice, Bala, Lake Talon, Agincourt, Haliburton, Bon Accord.
10. Coutts, Okotoks, Insinger, Arden, Ladner, Tobacco Plains, Macleod, Pekisko, Lloydminster, Sutton West, Agincourt, Paris, East Toronto.
11. Bruderheim, Croydon, Princeton, Rossland, Hillview, Cockburn Island, Lucknow, Paris, Brantford.
12. Croydon, Gatesgarth.
14. Crawford Bay.
15. Bruce Mines, Paspébiac.
16. Dutton, Emsdale, Huntsville, Midland, Strathroy, Westminster, North Nicomen, Tzouhalem.

Beatrice, Cockburn, Sand, Bala, Bruce Mines, Lake Talon, Clinton, Lucknow, Upplands, Madoc, Agincourt, Virgo, Paris, Brantford, Port Dover, Port Burwell, Brome, Shawenegan Falls, Point Lepreau.

17. Sutton West, Clinton, Port Burwell, Windsor, N.S.
18. Kenora.
19. Croydon, Warton, Meaford, Kenora, Haliburton.
20. Arden, Ingersole, Georgetown, Huntsville, Princeton, Bala, Sutton West, Lake Talon, Upplands, Madoc, Paris, East Toronto, Clontarf, Brantford, Port Burwell.
21. Sutton West.
22. Windsor, N.S.
23. Warton, Madoc, Port Hope.
24. Arden, Croydon, Ennismore, Sutton West, Madoc, Port Burwell, Shawenegan Falls.
25. Crawford Bay, Sutton West, Brome.
26. Nicola, Princeton, B.C., Salmon Arm.
27. Strathroy, Rossland.
28. Georgetown, Agincourt, East Toronto, Brantford, Port Dover.
29. Lansdowne.
30. Brome.

FORECASTS FOR SEPTEMBER, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1346. These were divided as follows :—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	78	60	12	6	81.6
Saskatchewan	79	63	11	2	88.6
Manitoba	83	64	14	5	86.5
Lake Superior	112	75	26	11	78.6
Lower Lake Region	12	100	21	4	84.4
Georgian Bay	120	101	19	5	88.1
Ottawa Valley.	121	92	23	6	85.5
Upper St. Lawrence	120	93	23	4	87.1
Lower St. Lawrence	120	92	22	6	85.8
Gulf	123	98	17	8	86.6
Maritime Provinces, West	130	96	25	3	83.5
Maritime Provinces, East	130	95	22	13	81.5
Total	1346	1020	238	79	85.3

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,

Director.

Meteorological Office, Toronto,

29th November, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

OCTOBER, 1907.

No. 10.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather on the islands and lower mainland of British Columbia was unusually mild and up to the 18th it was comparatively warm. After this date somewhat lower temperatures prevailed excepting from the 23rd to 25th when 60° was exceeded in many districts. Frosts were recorded at a few places and only on a very few days. Fine weather prevailed and the mean proportion of bright sunshine exceeded the average. The rainfall which in the aggregate was considerably below the average was recorded chiefly during the first and last week. On the 30th plants were still quite green they not having been affected by frost. On the upper mainland the weather was quite similar to that in districts to the westward, the mean temperature being well above the average and the precipitation considerably below. The wet periods were chiefly the first and last week also on or about the 12th and 22nd, but at many places they were less frequent. Frosts were recorded on many days.

In the Western Provinces the weather was unusually mild, more especially in Alberta, where at some stations the mean temperature excess was 6° or over. In the province referred to, the daily maximum temperature frequently exceeded 70° at some places, but the nights were comparatively cold and frosts were quite frequent. Exceedingly fine weather prevailed and the only precipitation of importance occurred on or about the 5th, 7th and 30th. Some plants remained green until a late date, but vegetation generally was withered by frost early in the month.

The weather in Manitoba, like that in provinces to the westward, was exceedingly fine, the mean proportion of bright sunshine being well above the average, and the sky being almost continuously unclouded from the 11th to 28th. Quite mild weather prevailed up to about the 23rd, and the mean temperature somewhat exceeded the average at many places, nevertheless the nights were generally cold and after the 17th hard frosts were very frequent. On the 1st there was much precipitation and lighter falls occurred occasionally during the first week, also on or about the 26th and 30th, but the aggregate amount was considerably below the average.

In Ontario the weather was unusually cold, and after the 18th, frosts were recorded on many days. From the 4th to 11th rain was of frequent occurrence and there were also falls on or about the 26th and 28th, but the aggregate amount was light in the western portion though heavy in eastern districts. After the 11th there was much fine weather and the proportion of bright sunshine exceeded the average. Light falls of snow occurred upon several days during the month.

The weather in the Province of Quebec was characterised by low mean temperatures; quite cold weather prevailed after the 18th, and frosts at night were of frequent occurrence throughout the month. Falls of rain or snow were somewhat frequent and in most districts the total precipitation was excessive; nevertheless there was much fine weather, more especially after the 13th, and the mean proportion of bright sunshine exceeded the average.

In New Brunswick the weather was mostly dull and wet up to the 11th, after which there were many fine days, but the proportion of bright sunshine was somewhat below the average. Up to the 18th the weather was generally quite mild, but after this date quite low temperatures prevailed and frosts occurred on many days. Gales were reported on the 4th, 8th and 21st. Snow was recorded upon several days after the 17th.

The weather in Nova Scotia was comparatively cool up to the 19th, and after that date quite low temperatures were reported, frost being of frequent occurrence. Dull weather prevailed, and in northern districts precipitation occurred on many days and exceeded the average quantity for the month. Elsewhere it was generally below the average and the falls were less frequent. Snow was recorded at many places on or about the 21st.

In Prince Edward Island the weather was somewhat cold, more especially after the 18th when frosts were frequent. Clouded skies prevailed and rain which occurred chiefly on or about the 1st, 4th, 6th to 8th, 12th to 14th, 21st to 24th and 28th to 30th, was slightly excessive in the aggregate. On the 21st and 29th snow was also recorded. —F. F. PAYNE.

BAROMETRIC PRESSURE.

The mean barometric pressure for October was in excess of normal over the greater portion of the Dominion, but negative departures were recorded in Quebec the Maritime Provinces and in northern Saskatchewan. The largest positive departure, +.08 of an inch, occurred at Port Arthur, Ont., and the highest negative departure, —.06 of an inch, at St. John, N.B.

HIGH AREAS.

Eleven areas of high pressure were traced during the month being much in excess of the usual number recorded in October. The areas all first appeared well to the northward in the northwestern portion of the continent and three as far north as the Yukon Territory. The general drift of the areas was southeasterly either over or to the southward of the Lake Region and thence off the United States Atlantic seaboard. Cool weather was their invariable accompaniment and as the month progressed some low night temperatures were experienced in many districts.

LOW AREAS.

Ten areas of low pressure were charted during the month, two appeared in the South Pacific States while the other eight were all first in evidence over the Yukon Territory and doubtless originally travelled in from the Pacific Ocean. The northwest areas passed south-eastward into the Western Provinces, thence either over or to the northward of the Lake Region and over the Gulf of St. Lawrence, while of the South Pacific areas one moved over and the other skirted the southern shores of the Lake Region. The areas were almost without exception of considerable energy conforming to the usual October type.

WINDS.

In British Columbia on Vancouver Island and over the Mainland the winds were mainly light to moderate and variable, a fresh or strong breeze being seldom experienced.

In Alberta and Saskatchewan the northwest, west and southwest directions were the most general with four days with strong and sixteen with fresh breezes and two gales.

In Manitoba the south and west directions were most in evidence with five days with strong and fourteen with fresh breezes and three gales.

In the Lake Region the westerly direction predominated with nine days with strong and seven with fresh breezes and four gales, the latter occurring between the 7th and 8th the 10th the 17th and between the 27th and the 28th.

In the Ottawa and Upper St. Lawrence Valleys the westerly direction was somewhat in the ascendency with seven days with strong and ten days with fresh breezes and three gales.

In the Lower St. Lawrence Valley and the Gulf the north and west directions were paramount with nine days with strong and nine with fresh breezes and seven gales, the gales being experienced on the 4th, the 8th, the 18th, the 20th, the 24th, the 26th and between the 28th and the 30th.

In the Maritime Provinces the direction was variable with twelve days with strong and eight with fresh breezes and six gales, the latter occurring on the 4th, the 8th, the 18th, the 21st, the 24th, and between the 28th and the 30th. Warnings issued to River Bay and Gulf stations on the 11th and 13th, were not justified by subsequent dangerous winds and a gale blew over the same districts on the 26th for which no warning was issued. The warnings forwarded on the 8th, 18th and 21st were in several localities reported received after the storm had begun and the gales in the Gulf of St. Lawrence on the 23rd and in the Lake Region on the 26th were only felt locally.

TEMPERATURE.

The temperature was supernormal from Eastern Saskatchewan to the Coast of British Columbia; normal in Southern Manitoba and very locally along the Gulf of St. Lawrence, elsewhere in Canada it was subnormal. Positive departures from the average were pronounced in Alberta, varying between 5 and 7 degrees while negative differences of from 2 to 7 degrees were recorded in Ontario and the greater portion of Quebec.

The Highest and Lowest temperatures in each Province during October, 1907, were:

British Columbia,	82° on 10th at Alberni,	2° on 16th at Atlin.
Alberta,	81° on 6th at Macleod.	6° on 17th at Paken.
Saskatchewan,	78° on 22nd at Battleford,	8° on 19th at Battleford and on 27th at Alameda.
Manitoba,	83° on 5th at St. Albans,	0° on 24th at Carberry.
Ontario,	80° on 1st at Sarnia,	16° on 28th at Bancroft.
Quebec,	67° on 17th at St. Anne de Bellevue,	10° on 27th at Clarke City.
New Brunswick,	67° on 18th at Chatham,	15° on 27th at St. Stephen.
Nova Scotia,	67° on 17th at Port Hastings,	17° on 20th at Truro.
P. E. Island,	65° on 10th at Hamilton,	25° on 26th at Summerside.

PRECIPITATION.

The precipitation of the month differed materially over various portions of the Dominion, in fact more so than usually occurs. From Manitoba to the Pacific Coast there was a decided deficiency, in some sections especially on the prairie reaching 100 per cent. whereas in the Ottawa and St. Lawrence Valleys there occurred an equally decided excess reaching 102 per cent. in the Gaspé Peninsula. In Ontario the precipitation varied considerably with the district, some localities recording a positive departure and others a negative. The same may be said of the Maritime Provinces except for Cape Breton when a considerable excess was recorded.

BRIGHT SUNSHINE.

Bright sunshine for October was in excess of normal throughout the greater part of the Dominion, small negative departure alone being recorded in New Brunswick. The extremes of departure were +17 per cent. of possible at Indian Head, Sask. and -4 per cent. at Fredericton, N. B.

ALBERTA—	54	43	113	17	1650																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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ONTARIO—Continued.

Stratford.....	1191	30.09	30.13	29.13	1.0	12.6	36.43	73.0	3	20.0	25.16.6	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Stony Creek.....	292	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Woodstock.....	980	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Welland.....	577	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Windsor.....	425	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Wallaceburg.....	425	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Agincourt.....	5390	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Bloomfield.....	2940	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
East Toronto.....	285	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Kingston.....	76.29	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Lakeside Home.....	76.29	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Port Hope.....	350	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Toronto.....	79.24	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Bancroft.....	77.50	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Clontarf.....	47.49	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Haliburton.....	1650	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Kinnmount.....	920	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Lindsay.....	78.28	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Lakeland.....	872	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Madoc.....	375	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
North Gower.....	47.43	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Ottawa.....	75.12	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Peterboro.....	671	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Rockville.....	722	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Rockville.....	722	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Renfrew.....	557	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Uxbridge.....	886	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0
Ursa.....	78.18	30.09	30.13	29.13	1.0	46.9	35.23	79.0	3	22.0	31.21.0	79	1	4	12	10	0	11	3	22	8	27	0	43	8.4	11:57 S.W.	3.02	-0.49	0.30	8.23	0	0	0

QUEBEC—

Abitibi.....	48	43	79	22	35.8	-	4	6	12	68	0	3	15	0	20	12	9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0
*Anticosti.....	49	6	61	42	38.1	-	2	26	50	0	18	26	0	21	15	9	7	12	9	12	12	3	10	16	1	12	30	0	43	1	69	+2	-22	1.30	8.23	0	0	2	
Anticosti, W. Point.....	49	24	63	35	30	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Anticosti, S.W. Point.....	49	24	63	35	30	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Bird Rocks.....	47	22	61	32	30	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Brome.....	48	25	61	53	678	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Brome.....	48	25	61	53	678	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Chapais.....	45	10	72	30	150	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Chapais.....	45	10	72	30	150	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Chicoutimi.....	48	25	71	5	150	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Chicoutimi.....	48	25	71	5	150	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Cape Chaitie.....	49	6	64	43	93	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Cape Magdalen.....	49	16	65	20	93	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Cape Magdalen.....	49	16	65	20	93	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Father Point.....	48	31	68	13	20	29	42	30	46	20	20	17	25	0	30	13	1	11	11	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Father Point.....	48	31	68	13	20	29	42	30	46	20	20	17	25	0	30	13	1	11	11	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Montreal.....	45	39	73	33	187	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Montreal.....	45	39	73	33	187	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Nasopiac.....	48	2	65	2	163	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Nasopiac.....	48	2	65	2	163	30.09	30.13	29.13	1.0	35.8	1.6	12.6	0	3	15.0	20.12.9	7	11	22	6	5	2	16	9	18	15	0	43	III	VII	17 W	2.78	-0.19	1.10	8.20	0	0	0	
Quebec.....	48	31	61	12	30	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Quebec.....	48	31	61	12	30	11	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Sherbrooke.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Sherbrooke.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Steele, Anne de Bellevue.....	45	32	72	5	40	1	0	3	2	33	60	0	18	17	5	31	17	5	11	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Shawinigan.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Shawinigan Falls.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Shawinigan Falls.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2
Roberval.....	46	45	71	13	206	29	98	30	57	25	1	29	19	0	31	12	8	19	1	2	10	3	3	0	20	12	11	1	62	4	32	-2	11	1	32	12	3	0	2

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING OCTOBER, 1907.

STATION.	RAINFALL					SNOWFALL					REMARKS.
	Amount in inches	No. of Days, or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days	Heaviest Fall in Month	Date		
BRITISH COLUMBIA	in.			in.		in.		in.			
Beaver Lake.....	0.90	4	27	0.48							
Coquitlam.....	2.77	8	23	1.12							
Dennan Island.....	1.95	5	26	0.80							
Goldstream Lake.....	1.35	9	22	0.41							
Hartley Bay.....	2.83	11	17	1.00							
Nuas Harbour.....	15.21	18	13	2.41							
Nanaimo.....	0.71	1	25	0.26	28					Fog on 26, 27.	
Royal Oak.....											
Somas River.....	2.12	7	21	0.68							
Swanson Bay.....	18.15	21	10	2.87							
ALBERTA											
Bardo.....	0.00	0	31	0.00							
Beaver Hills, W.....	0.01	1	31	0.01	31						
Bismark.....	0.33	1	29	0.33	5						
Bruderheim.....	0.25	3	28	0.16	1						
Bittern Lake.....	0.31	3	28	0.24	31						
Coutts.....	0.25	1	29	0.25	1						
Clover Bar.....											
Conjuring Creek.....	0.32	2	29	0.21	30						
Dorence.....	0.29	2	29	0.26	30					Thunder 30.	
Grassy Lake.....	0.00	0	31	0.01							
Heather Brae.....	0.85	4	27	0.48	31						
Islay.....											
Innisfail.....											
Josephsburg.....	0.00	0	31	0.00							
Jumping Pound.....	0.21	3	28	0.16	1					Trace of snow on 1st.	
Kimball.....	0.00	0	31	0.00							
Lacombe.....	0.11	2	29	0.10	30						
Leavings.....											
Macleod.....	0.15	1	30	0.15	7						
Magrath.....	0.17	1	30	0.17	5						
Mayton.....	0.32	1	30	0.32	30						
Morinville.....											
Okotoks.....	0.00	0	31	0.00							
Ponoka.....	0.30	1	30	0.30	5						
Sion.....	0.34	1	27	0.25	5						
Stirling.....											
Saddle Lake.....	0.00	0	31	0.00							
Vermilion.....											
Wabamun.....	0.14	4	27	0.32	31						
SASKATCHEWAN											
Arcola.....											
Elm How.....	0.25	1	26	0.25	31					Fog 1, 28, 29.	
Hanley.....	1.20	1	29	1.20	7					Aurora 2, 13, 11, 27, 28, Fog 7.	
Insinger.....											
Last Mountain.....	0	0	30	0	8						
Regina.....	0.05	2	27	0.04	6					Fog 5, 13, 14.	
MANITOBA											
Beaver.....	0.44	2	29	0.12	1						
Cartwright.....	0.71	5	26	0.45	8					Aurora 14, 28.	
Greta.....	0.35	2	27	0.25	27						
Norquay.....	0.34	4	27	0.15	1		2			Fog 30, 31.	
Rapid City.....	0.27	3	28	0.18	1	0.1	1	0.1	31	Fog 2, 31.	
Rosebank.....											
ONTARIO											
Aurora.....	1.84	8	23	0.46	3					Thunder 7, 10.	
Arden.....	2.93	12	19	0.79	8					Fog 16.	
Croydon.....	0.31	3	28	0.11	28						
Deer Park.....	1.90	6	25	0.67	28						
Dutton.....	1.88	5	26	0.70	7					Thunder 7, 10.	
Ensdale.....	2.63	13	18	0.70	7					Aurora 1.	
Ennismore.....	2.45	6	25	0.45	6						
Goderich.....	1.94	7	24	0.70	27						
Georgetown.....	1.85	9	22	0.61	27					Thunder 7, 10. Fog 27.	
Huntsville.....	3.09	8	23	1.15	7					Aurora 1, 11.	
Lansdowne.....	1.74	3	28	1.38	7						
MacCue.....	1.48	5	26	1.35	8						
Midland.....	3.53	6	25	1.55	4		1		26		
Montague.....	2.24	5	26	0.70	5						
Orangeville.....	1.50	8	23	0.62	8						
Princeton.....	2.02	4	27	0.33	7					Thunder 9.	
Sydenham.....	3.35	4	27	1.15	7						
Strathroy.....	2.59	9	22	0.65	3					Thunder 8.	
Watford.....	3.70	8	23	1.06	12						
Westport.....	2.76	7	23	0.92	7						
Wooler.....	2.86	7	24	0.89	8					Thunder 7.	
Westminster.....	1.80	5	26	0.49	6					Thunder 10.	
Warton.....	1.61	8	23	0.43	6					Thunder 9, 10.	
NEW BRUNSWICK											
Point Esenminac.....	3.42	8	23	1.26	30		2				

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF OCTOBER, 1907.

STATIONS.	HOURS ENDING																
	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.
Victoria					0.09	0.20	0.35	0.48	0.45	0.47	0.49	0.51	0.57	0.24			
Nanaimo					0.24	0.38	0.51	0.55	0.61	0.60	0.51	0.49	0.52	0.28	%		
Agassiz					0.05	0.34	0.57	0.61	0.65	0.73	0.72	0.67	0.44	0.05			
Kamloops				0.06	0.22	0.39	0.58	0.63	0.71	0.60	0.68	0.60	0.56	0.15			
Savonas																	
Calgary																	
Edmonton					0.26	0.60	0.71	0.72	0.77	0.84	0.85	0.83	0.73	0.30	0.01		
Medicine Hat				0.21	0.61	0.80	0.85	0.90	0.87	0.86	0.85	0.75	0.49	0.01			
Battleford																	
Indian Head					0.13	0.55	0.69	0.76	0.75	0.79	0.80	0.84	0.45	0.15			
Brandon					0.12	0.49	0.59	0.64	0.72	0.71	0.74	0.75	0.59	0.30			
Winnipeg					0.29	0.46	0.52	0.57	0.57	0.51	0.52	0.46	0.42	0.28			
Woodstock					0.13	0.51	0.59	0.52	0.47	0.50	0.59	0.51	0.45	0.11			
Toronto				0.01	0.30	0.66	0.72	0.71	0.70	0.67	0.56	0.55	0.52	0.33	0.01		
Lindsay				0.04	0.44	0.55	0.51	0.56	0.51	0.57	0.51	0.42	0.13	0.31	0.11		
Barrie				0.02	0.39	0.48	0.51	0.52	0.56	0.55	0.54	0.46	0.11	0.23			
Gravenhurst				0.07	0.30	0.46	0.47	0.45	0.44	0.43	0.40	0.36	0.25	0.11			
Haileybury				%	0.16	0.30	0.42	0.42	0.46	0.45	0.45	0.44	0.33	0.26			
Kingston				0.07	0.23	0.58	0.71	0.81	0.72	0.62	0.52	0.51	0.35	0.16			
Ottawa					0.12	0.36	0.43	0.55	0.57	0.55	0.54	0.53	0.48	0.26	%		
Montreal				%	0.17	0.35	0.43	0.55	0.55	0.48	0.56	0.52	0.33	0.01			
Sherbrooke				0.01	0.11	0.30	0.45	0.59	0.47	0.45	0.49	0.47	0.43	0.26			
Quebec					0.11	0.28	0.47	0.56	0.55	0.59	0.49	0.49	0.46	0.30	0.01		
Fredericton				0.01	0.21	0.46	0.51	0.56	0.55	0.49	0.42	0.43	0.36	0.31	0.05		
Charlottetown				0.01	0.28	0.33	0.47	0.52	0.52	0.50	0.42	0.37	0.30	0.18	0.02		

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Savonas.	Calgary.	Edmonton.	Medicine Hat.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month Constant sunshine being 1	0.33	0.43	0.45	0.50			0.43	0.67		0.55	0.53	0.43	0.40	0.52	0.45	0.43	0.34	0.34	0.48	0.40	0.42	0.35	0.39	0.40	0.36
Difference from average.	0.03	—	0.10							+0.17	+0.12	+0.05	0.00	+0.02	—0.03	—0.02			+0.07	+0.05	+0.06	—	+0.03	0.01	—
Maximum daily amount.	0.83	0.76	0.76	1.00			0.92	0.90		0.79	0.86	0.94	0.89	0.70	0.58	0.91	0.93	0.93	0.91	0.86	0.88	0.70	0.91	0.95	0.94
Date.	9	18	18	31			20	18		17	17	22	29	21	18	30	20	20	21	12	20	9	31	9	22
No. of days completely clouded	6	7	6	3			1	4		0	3	11	9	1	2	2	13	8	3	4	4	8	7	6	10

Thunder recorded on :

3. Brantford, Birnam, Lucknow, Clinton.
4. Cottam.
5. Gray Hill, Hillsdown, Chaplin, Cottam.
7. Aurora, Dutton, Georgetown, Strathroy, Wooler, Bon Accord, East Toronto, Otonabee, Paris, Brantford, Birnam, North Bruce, Clinton.
8. Sutton West.
9. North Bruce, Wiarton.
10. Aurora, Dutton, Georgetown, Strathroy, Westminster, East Toronto, Agincourt, Stony Creek, Paris, Brantford, Birnam, Point Clark, Owen Sound, North Bruce, Lucknow, Wiarton.
11. Otonabee, Madoc, Sutton West.
13. Brome.
30. Doreenlee, Gray Hill, Alix.

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Carcross, Sion, Emsdale, III ; Huntsville, III ; Hillview, IV ; Gray Hill, III ; Waitfield, IV ; Humboldt, II ; Chaplin, IV ; Foxleigh, Madoc, III ; Lake Talon, Chicoutimi.
2. Insinger, III ; Red Willow, Hillsdown, IV ; Waitefield, IV ; Meota, III ; Chaplin, IV ; Chicoutimi, Shawinigan Falls.
3. Gray Hill, IV ; Birnam, III.
8. Gray Hill, III ; Red Willow, Pakan, III ; Hillsdown, IV ; Waitefield, II ; Moose Jaw, Chaplin, III ; Foxleigh, Madoc, IV ; Stony Creek, II ; North Bruce, Lucknow, Lake Talon.
9. St. Albans, IV ; Red Willow.
10. Sion, Gray Hill, III ; Red Willow, Pakan, III ; Hillsdown, IV ; Whitefield, III ; Chaplin, III ; Woodstock, N.B.
12. St. Albans, I ; Brownhill, IV.
13. Insinger, II ; Kneehill, Gray Hill, IV ; Red Willow, Waitefield, II ; Cape Magdalen.
14. Insinger, II ; Cartwright, III ; Huntsville, III ; St. Albans, I ; Gray Hill, II ; Red Willow, Pakan, I ; Hillsdown, IV ; Waitefield, I ; Moose Jaw, Chaplin, IV ; Brantford, Meaford, Lucknow, Lake Talon, Shawinigan Falls, Cape Magdalene, Woodstock, N.B.
15. White Horse, I.
22. Waitefield, IV ; Shawinigan Falls.
23. Waitefield, IV.
26. Brownhill, IV.
27. Insinger, IV ; Waitefield, IV.
28. Insinger, IV ; Cartwright, IV ; Pakan, III ; Waitefield, IV ; Chaplin, IV.
29. Waitfield, IV.
31. Chaplin, IV.

FORECASTS FOR OCTOBER, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1327. These were divided as follows:—

DISTRICT.	No. Issued.	VERIFIED.			Per- centage.
		No. Fully	No. Partly	No. Not	
Alberta	83	65	7	11	82.5
Saskatchewan	83	61	12	7	84.3
Manitoba	86	66	12	8	83.7
Lake Superior	112	82	21	9	82.5
Lower Lake Region	127	93	28	6	84.3
Georgian Bay.	126	93	20	4	84.6
Ottawa Valley.	111	92	20	2	89.5
Upper St. Lawrence	111	93	19	2	89.9
Lower St. Lawrence.	118	90	20	8	84.7
Gulf.	120	90	22	8	84.2
Maritime Provinces, West	122	101	11	10	87.3
Maritime Provinces, East.	122	92	21	9	84.0
Total	1327	1021	222	81	85.3

In order to obtain the percentage of verification of the productions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director.

Meteorological Office, Toronto.
9th December, 1907.

DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

NOVEMBER, 1907.

No. 11.

INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather on the lower mainland and Islands of British Columbia was quite mild up to the 16th, after which somewhat lower temperatures set in and continued almost uninterruptedly to the end of the month. In most districts the mean proportion of bright sunshine exceeded the average, but there was much dull weather with frequent precipitation during the first week also during the third and last weeks. Light snow was recorded at some places on the mainland late in the month, but it soon disappeared. On the upper mainland with the exception of some cool weather on or about the 11th, or 12th, high temperatures prevailed up to the 17th. After the latter date it became somewhat cooler and continued so to the end of the month. The precipitation which was light in most localities and included some snow was recorded chiefly during the first week and from the 16th to 30th. The intervening period was comparatively fine but the mean proportion of bright sunshine was below the average.

In the Western Provinces the weather was exceedingly mild throughout the greater portion of the month, low temperatures at night, however, were of frequent occurrence and the daily range then recorded exceeded 30° in many instances. Fine weather with much bright sunshine was general and with the exception of a little light snow or rain at some stations on or about 3rd, 6th, 10th, 16th and 28th, precipitation was practically absent.

In Manitoba the weather as in the provinces immediately to the westward was unusually mild, nevertheless cold weather was recorded between the 11th, and 19th, and during the last few days when upon several nights temperatures below zero were reported. The precipitation, which varied considerably with the district, occurred chiefly on or about the 5th, 9th, 10th, 11th, 14th, 18th, 21st, 27th and 29th, and in the aggregate was quite light at most localities. Some fine weather occurred during the intervening periods, and at Brandon the proportion of bright sunshine exceeded the average. Owing to the open condition of the season ploughing was possible up to the 13th.

The weather in Ontario was mostly wet and mild during the first ten days after which somewhat finer weather set in and continued to the 20th. On the 21st, it became more unsettled and showers of rain or snow were occasionally recorded up to the end of the month. From the 18th to 27th, the weather was milder than that of the previous week, but on the last two or three days of the month it again turned colder. Sharp frosts were recorded about the 11th to 17th. On the last day of the month there was a light covering of snow in northern districts and a still lighter covering in the southern portion of the Province.

In the Province of Quebec the weather was quite mild up to the 11th and comparatively cold during the remainder of the month excepting on or about the 19th and 22nd to 24th when it was mild. The last day of the month was cold, and there were sharp frosts at night upon several occasions during the month. Dull weather prevailed and precipitation was frequent from the 3rd to 14th and 21st to 29th it being less frequent in eastern districts than elsewhere. On the last day of the month the ground was covered with snow to a depth of several inches.

In New Brunswick the weather was mild during the first ten or eleven days, also somewhat less so on or about the 14th and from the 16th to 26th. The nights, however, were generally cold and comparatively low temperatures prevailed during the intervening periods. Precipitation was frequent from the 1st to 11th and there were showers on or about the 26th and 29th snow occurring on the latter date. During the first two or three days and from the 12th to 25th there was much fine bright weather and the mean proportion of bright sunshine exceeded the average. Moderate south-east gales were recorded on the 3rd and 25th, and there was a heavy easterly gale on the 7th. Dense fogs were general on the 2nd and 23rd.

The weather in Nova Scotia was mild and open throughout the greater portion of the month and was more especially so during the first twelve days. Frosts occurred occasionally at night after the 12th but they were mostly light. Precipitation was frequent from the 4th to 15th, also from the 26th to 30th and included snow at some places on the 14th, 15th, 27th and 30th. Comparatively fine weather was general during the first three days also from the 16th to 25th. Gales were reported on the 3rd and 25th.

In Prince Edward Island the weather was mild up to the 12th, after which it became somewhat colder and on the 16th and 30th, quite cold weather was general. Frosts at night were frequent after the 10th. Much fine weather was recorded, but from the 4th to 12th it was mostly unsettled and showery, and from the 25th to 28th showers were also frequent. Snow was reported on the 12th and 28th.—F. F. PAYNE.

BAROMETRIC PRESSURE.

On the Pacific and Atlantic coasts the mean atmospheric pressure for November was supernormal, whilst elsewhere in Canada, with the exception of a portion of Ontario where the normal was just exceeded, values were everywhere subnormal, with the greatest deficiency over the Prairie Provinces. The extremes of departure from average were +0.13 of an inch at New Westminster, B.C., and Sydney, N.S., and —0.17 of an inch at Prince Albert, Sask.

HIGH AREAS.

Nine areas of high pressure were charted during the month, but with few exceptions they were not very energetic. The drift of areas into the United States Pacific States from the ocean, and thence across the southern portion of the continent was very marked, and there was a corresponding absence of important systems sweeping down from the far northwestern portion of the continent, and as a natural sequence few pronounced cold waves were experienced.

LOW AREAS.

Eighteen areas of low pressure were charted during the month which is a larger number than is usually recorded in November. Their general track lay far to the northward, conforming to the conditions which had been existing for some successive previous months. Three areas first appeared in the Gulf of Mexico, two off the south Atlantic coast, one in the Pacific States, well to the southward, and the remaining twelve in the northwestern portion of the continent. Some few of the areas were of much importance, but the larger number were not very energetic.

WINDS.

In British Columbia, on Vancouver Island and over the mainland, the direction was variable with ten days with strong and eight with fresh breezes and one gale.

In Alberta, the south and west directions largely predominated, with eight days with strong and nine with fresh breezes and two gales.

In Saskatchewan, the south and west directions were the most general, with seven days with strong and eight with fresh breezes and two gales.

In Manitoba, the direction was chiefly northwesterly and southwesterly, with twelve days with strong and nine with fresh breezes and one gale.

In the Lake Region, the south and west directions were the most in evidence, with two days with strong and ten with fresh breezes and six gales, the latter occurring between the 2nd and 3rd, between the 6th and 7th, the 13th, between the 20th and 21st on the 26th and between the 27th and 28th.

In the Ottawa and Upper St. Lawrence Valley, the direction was more or less variable, favouring the westerly with four days with strong and twelve with fresh breezes and four gales.

In the Lower St. Lawrence Valley and Gulf, the westerly direction was paramount, but the south, north and east, were all much in evidence. There were thirteen days with strong and six with fresh breezes and four gales, the latter occurring between the 3rd and 4th, on the 7th, the 14th and between the 26th and 27th.

In the Maritime Provinces the direction was very similar to that in the Lower St. Lawrence Valley and the Gulf. There were six days with strong and thirteen with fresh breezes and three gales, the latter occurring on the 3rd, between the 6th and 7th and on the 25th.

The gales which were experienced from the Lake Region to the Maritime Provinces were not as a rule of severity; on the contrary they were for the most part of a moderate type. They were duly warned except the moderate gale which prevailed in the Gulf of St. Lawrence on the 14th.

BRIGHT SUNSHINE.

Generally speaking the duration of bright sunshine did not vary much from the average over the Western Provinces, but there was a deficiency of from 2 to 7 per cent of the possible in both Ontario and Quebec, the number of hours of sunshine ranging between 50 and 66. In the Maritime Provinces an excess was registered at Fredericton and Charlottetown: the former station recording 102 hours and the latter 104, and similar conditions probably obtained also in Nova Scotia. The largest number of hours of sunshine reported was 134 at Medicine Hat, and the least was 41 hours at Agassiz, B.C.

TEMPERATURE.

The mean temperature of November was higher than the average throughout the Western Provinces and in British Columbia, the widest departure about 10° occurring in Alberta and Saskatchewan. In Ontario, east of Lake Huron and north of Lakes Erie and Ontario, the departure was very generally negative by 1 or 2 degrees, while in Quebec and the Maritime Provinces the mean of the month ranged from just average to 2° above. From Ontario to the Maritime Provinces there were but two fairly pronounced cool periods, namely, from the 12th to 16th, and again during the last few days of the month.

The Highest and Lowest temperatures in each Province during November, 1907, were:

Yukon Territory,	50° at Carcross on 11th,	-18° at White Horse on 6th.
British Columbia,	69° at Agassiz on 22nd,	-4° at Golden on 27th.
Alberta,	70° at Lawrence on 3rd,	-6° at Lawrence on 27th.
Saskatchewan,	62° at Gatesgarth on 6th,	-8° at Waseca on 13th.
Manitoba,	57° at Oakbank on 1st,	-17° at Oakbank on 29th.
	Morden and St. Albans on 6th,	
Ontario,	58° at Welland on 2nd,	-1° at Lake Talon on 20th and Rockcliffe on 29th.
Quebec,	57° at Cape Magdalen on 3rd,	-5° at Brome on 30th.
New Brunswick,	62° at Sussex on 2nd,	-8° at Moncton on 29th.
Nova Scotia,	67° at Port Hastings on 1st,	-16° at Parrsboro on 17th, and Windsor on 16th.
P. E. Island,	59° at Hamilton on 4th,	-19° at Summerside on 17th and 29th.

PRECIPITATION.

The precipitation was heavy over the Lower Mainland of British Columbia and comparatively light on the Upper Mainland, 13.2 inches were recorded at Vancouver, 8.6 at Agassiz, and but 0.5 at Kamloops. In the Western Provinces it was almost nil, ranging from just a few snow flurries in Alberta to an aggregate of 0.15 rain and about 4 inches of snow in Manitoba. Over the greater portion of Ontario the precipitation was part rain and part snow, but chiefly the former. It was fairly generally in excess of the average except near the shore lines of the lakes, where there was a small deficiency. In Quebec and the Maritime Provinces departures from the average amount were not pronounced except in Prince Edward Island, where the quantity recorded was much below average and decidedly less than in New Brunswick and Nova Scotia.

DEPTH OF SNOW.

At the close of the month there was a slight covering of snow over the whole of Quebec and over the larger portion of Ontario, while in parts of this latter Province east and north of the Georgian Bay as much as 12 inches was reported. In northern New Brunswick there was also a slight covering, but further south and including Prince Edward Island and Nova Scotia there was but a trace here and there. In Manitoba there was from half an inch to 2 inches, but further west all the prairie lands were quite bare as were also the lower levels in British Columbia.

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA NOVEMBER, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Kew-sterling Thermometers.

[illegible]

ALBERTA—		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100		2101		2102		2103		2104		2105		2106		2107		2108		2109		2110		2111		2112		2113		2114		2115		2116		2117		2118		2119		2120		2121		2122		2123		2124		2125		2126		2127		2128		2129		2130		2131		2132		2133		2134		2135		2136		2137		2138		2139		2140		2141		2142		2143		2144		2145		2146		2147		2148		2149		2150		2151		2152		2153		2154		2155		2156		2157		2158		2159		2160		2161		2162		2163		2164		2165		2166		2167		2168		2169		2170		2171		2172		2173		2174		2175		2176		2177		2178		2179		2180		2181		2182		2183		2184		2185		2186		2187		2188		2189		2190		2191		2192		2193		2194		2195		2196		2197		2198		2199		2200		2201		2202		2203		2204		2205		2206		2207		2208		2209		2210		2211		2212		2213		2214		2215		2216		2217		2218		2219		2220		2221		2222		2223		2224		2225		2226		2227		2228		2229		2230		2231		2232		2233		2234		2235		2236		2237		2238		2239		2240		2241		2242		2243		2244		2245		2246		2247		2248		2249		2250		2251		2252		2253		2254		2255		2256		2257		2258		2259		2260		2261		2262		2263		2264		2265		2266		2267		2268		2269		2270		2271		2272		2273		2274		2275		2276		2277		2278		2279		2280		2281		2282		2283		2284		2285		2286		2287		2288		2289		2290		2291		2292		2293		2294		2295		2296		2297		2298		2299		2300		2301		2302		2303		2304		2305		2306		2307		2308		2309		2310		2311		2312		2313		2314		2315		2316		2317		2318		2319		2320		2321		2322		2323		2324		2325		2326		2327		2328		2329		2330		2331		2332		2333		2334		2335		2336		2337		2338		2339		2340		2341		2342		2343		2344		2345		2346		2347		2348		2349		2350		2351		2352		2353		2354		2355		2356		2357		2358		2359		2360		2361		2362		2363		2364		2365		2366		2367		2368		2369		2370		2371		2372		2373		2374		2375		2376		2377		2378		2379		2380		2381		2382		2383		2384		2385		2386		2387		2388		2389		2390		2391		2392		2393		2394		2395		2396		2397		2398		2399		2400		2401		2402		2403		2404		2405		2406		2407		2408		2409		2410		2411		2412		2413		2414		2415		2416		2417		2418		2419		2420		2421		2422		2423		2424		2425		2426		2427		2428		2429		2430		2431		2432		2433		2434		2435		2436		2437		2438		2439		2440		2441		2442		2443		2444		2445		2446		2447		2448		2449		2450		2451		2452		2453		2454		2455		2456		2457		2458		2459		2460		2461		2462		2463		2464		2465		2466		2467		2468		2469		2470		2471		2472		2473		2474		2475		2476		2477		2478		2479		2480		2481		2482		2483		2484		2485		2486		2487		2488		2489		2490		2491		2492		2493		2494		2495		2496		2497		2498		2499		2500		2501		2502		2503		2504		2505		2506		2507		2508		2509		2510		2511		2512		2513		2514		2515		2516		2517		2518		2519		2520		2521		2522		2523		2524		2525		2526		2527		2528		2529		2530		2531		2532		2533		2534		2535		2536		2537		2538		2539		2540		2541		2542		2543		2544		2545		2546		2547		2548		2549		2550		2551		2552		2553		2554		2555		2556		2557		2558		2559		2560		2561		2562		2563		2564		2565		2566		2567		2568		2569		2570		2571		2572		2573		2574		2575		2576		2577		2578		2579		2580		2581		2582		2583		2584		2585		2586		2587		2588		2589		2590		2591		2592		2593		2594		2595		2596		2597		2598		2599		2600		2601		2602		2603		2604		2605		2606		2607		2608		2609		2610		2611		2612		2613		2614		2615		2616		2617		2618		2619		2620		2621		2622		2623		2624		2625		2626		2627		2628		2629		2630		2631		2632		2633		2634		2635		2636		2637		2638		2639		2640		2641		2642		2643		2644		2645		2646		2647		2648		2649		2650		2651		2652		2653		2654		2655		2656		2657		2658		2659		2660		2661		2662		2663		2664		2665		2666		2667		2668		2669		2670		2671		2672		2673		2674		2675		2676		2677		2678		2679		2680		2681		2682		2683		2684		2685		2686		2687		2688		2689		2690		2691		2692		2693		2694		2695		2696		2697		2698		2699		2700		2701		2702		2703		2704		2705		2706		2707		2708		2709		2710		2711		2712		2713		2714		2715		2716		2717		2718		2719		2720		2721		2722		2723		2724		2725		2726		2727		2728		2729		2730		2731		2732		2733		2734		2735		2736		2737		2738		2739		2740		2741		2742		2743		2744		2745		2746		2747		2748		2749		2750		2751		2752		2753		2754		2755		2756		2757		2758		2759		2760		2761		2762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ONTARIO—Concluded.

[illegible]

QUESTIONS

New Yorker

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING NOVEMBER, 1907.

STATION.	RAINFALL					SNOWFALL					REMARKS.
	Amount in inches	No. of Days, or, over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days	Heaviest Fall in Month	Date.		
BRITISH COLUMBIA—											
Alberni (Somers River).....	16.01	21	9	2.53	28	*					
Beaver Lake.....	5.60	17	13	0.75	23 27						
Coquitlam.....	15.34	16	14	2.05	28						3 Fogs.
Denman Island.....	9.55	17	13	1.92	27						4 Fogs.
Goldstream Lake.....	13.42	22	8	1.71	29	*	2				
Hartley Bay.....	15.81	16	12	2.50	15	3.0	2	2.0	25		
Hornby Island.....	4.22	7	—	1.88	28						
Naas Harbour.....	15.84	19	8	1.42	7 16	4.0	3	2.0	25		Thunder 1 th.
Nanaimo.....	6.71	9	21	2.20	28						
Swanson Bay.....	31.89	25	5	3.53	7						
ALBERTA—											
Bardo.....	0.00	0	30	0.00	—	0.0	0	0.0	—		No Precipitation during month.
Beaver Hills, W.....	0.03	2	27	0.02	16	*	1	*	2		
Bismark.....											
Bruderheim.....	0.01	1	29	0.01	4						
Bittern Lake.....	0.06	1	25	0.06	16						
Coutts.....						*	1	*	16		
Clover Bar.....											
Conjuring Creek.....	0.11	2	28	0.09	3						
Dorence.....	0.03	1	28	0.03	16						
Grassy Lake.....						0.5	1	1.5	13		
Heather Brae.....	0.06	2	28	0.01	16						
Islay.....											
Innisfail.....											
Josephsburg.....						3.0	3	1.5	19		
Jumping Pound.....	0.30	3	27	0.20	6	*	4	*	—		
Kimball.....						*	1	*	24		
Lacombe.....	0.01	1	28	0.01	6						
Leavings.....											
Macleod.....						1.5	2	1.0	13		
Magrath.....						0.5	1	0.5	10		
Mayton.....											
Morinville.....	0.05	1	28	0.05	12	*	1	*	29		
Okotoks.....	R	0	27	R	6	*	3	*	—		
Ponoka.....	0.04	1	28	0.04	16	*	1	*	2		
Sion.....	0.08	3	27	0.05	2						Aurora 10, 26, 29, 30.
Stirling.....											
Saddle Lake.....	0.00	0	16	—	—						
Vermilion.....											
Wabamun.....	0.18	3	27	0.14	6	*	1	*	29		
SASKATCHEWAN—											
Arcola.....											
Elm How.....											
Hanley.....											
Insinger.....	0.01	—	23	—	—	4.5	6	2.0	26-29		Zero on 11th.
Last Mountain.....											
Regina.....	0.02	1	22	0.02	26	1.0	6	0.5	20		
MANITOBA—											
Beaver.....											
Cartwright.....	R	0	26	R	1	3.5	3	2.0	26		Aurora , 9th.
Gretna.....	0.00	0	27	—	—	4.5	3	2.5	29		
Norquay.....	0.01	1	25	0.01	7	4.0	4	2.0	27		
Rapid City.....	R	0	22	R	6	3.2	7	2.0	26		Fog 0th.
Rosebank.....											
ONTARIO—											
Aurora.....	2.96	6	23	1.49	3	2.6	4	1.8	27		
Arden.....	3.49	8	20	1.86	3	3.0	2	2.0	29		
Croyden.....	3.50	3	25	1.89	3	3.0	2	2.0	28		
Deer Park.....	3.6	8	20	1.91	3	0.2	2	0.2	29		
Dutton.....	3.56	4	21	1.35	2	0.5	2	0.5	30		
Ensdale.....	2.85	10	15	0.95	2	10.8	5	3.0	29		
Ennismore.....	2.70	4	22	1.30	2	6.0	2	4.0	28		
Goderich.....	1.53	6	19	0.50	2	9.0	6	3.0	11		
Georgetown.....	2.58	13	11	1.11	2	2.3	10	0.6	27		Aurora 3rd.
Huntsville.....	2.10	5	20	0.9	2	8.5	5	3.5	28		
Lansdowne.....	4.27	3		2.10	2	1.0	1	1.0	30		
MacCue.....	3.21	4	25	1.88	7	2.0	2	2.0	28		
Midland.....	2.64	8	17	0.82	3	11.5	5	4.0	27		
Montague.....	2.62	3	25	1.78	7	1.0	1	1.0	28		
Orangeville.....	4.60	7	21	2.41	3	3.3	2	2.1	14		
Princeton.....	3.16	7	22	1.61	4	1.0	2	1.0	11		
Sydenham.....	3.75	4	25	1.60	2	2.0	1	2.0	—		
Strathroy.....	2.55	8	20	1.34	2	2.0	2	1.0	11 30		
Watford.....	2.59	7	23	0.93	2						
Westport.....	1.79	2	27	1.32	3	3.3	1	3.3	30		
Wooler.....	4.43	7	20	2.05	3	6.0	2	6.0	28		
Westminster.....	2.05	3	21	1.02	21	*	5	*	—		
Warton.....	2.27	6	20	0.64	20	5.2	4	2.5	29		
NEW BRUNSWICK—											
Point Escuminae.....	2.57	5	24	1.29	7	0.1	1	0.1	28		Fog 26th.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF NOVEMBER, 1905.

STATIONS.	Hours Ending															
	1 a. m.	3 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	8 p. m.
Victoria				0.01	0.05	0.22	0.31	0.24	0.30	0.34	0.38	0.33	0.30	0.02		
Nanaimo				0.04	0.12	0.13	0.21	0.28	0.26	0.34	0.32	0.25	0.15	0.02		
Agassiz				0.00	0.00	0.02	0.17	0.17	0.22	0.24	0.24	0.18	0.12	0.00		
Kamloops				0.04	0.06	0.21	0.28	0.32	0.34	0.41	0.49	0.32	0.12	0.00		
Savona.																
Calgary																
Edmonton				0.00	0.04	0.25	0.43	0.52	0.54	0.46	0.44	0.52	0.23	T		
Medicine Hat				0.00	0.20	0.52	0.65	0.64	0.64	0.66	0.60	0.46	0.11	0.00		
Battleford																
Indian Head				0.00	0.00	0.08	0.35	0.52	0.47	0.47	0.48	0.37	0.06	0.00		
Brandon				0.00	0.00	0.17	0.31	0.40	0.50	0.48	0.64	0.48	0.25	T		
Winnipeg.				0.04	0.05	0.22	0.36	0.43	0.40	0.39	0.37	0.38	0.26	0.10		
Woodstock.				0.00	0.00	0.18	0.25	0.21	0.21	0.30	0.27	0.21	0.08	0.00		
Toronto...				0.00	0.04	0.30	0.36	0.41	0.44	0.36	0.26	0.22	0.20	0.02		
Lindsay.				0.00	0.08	0.12	0.16	0.21	0.23	0.26	0.28	0.21	0.17	0.06		
Barrie.				0.00	0.03	0.23	0.26	0.26	0.33	0.32	0.29	0.26	0.12	0.00		
Gravenhurst.				0.00	0.10	0.19	0.21	0.24	0.23	0.23	0.23	0.14	T	0.00		
Halleybury...				0.00	0.03	0.10	0.14	0.18	0.24	0.26	0.28	0.27	0.24	0.06		
Kingston.....				0.00	0.03	0.12	0.29	0.36	0.36	0.29	0.20	0.25	0.17	0.02		
Ottawa.....				0.00	T	0.14	0.27	0.28	0.26	0.31	0.37	0.34	0.19	0.01		
Montreal...				0.00	0.00	0.06	0.21	0.33	0.35	0.28	0.26	0.21	0.07	0.00		
Sherbrooke...				0.00	0.04	0.15	0.18	0.29	0.30	0.33	0.32	0.26	0.11	0.03		
Quebec...				0.00	0.02	0.17	0.26	0.29	0.33	0.27	0.29	0.21	0.14	0.04		
Fredericton				0.00	0.03	0.23	0.35	0.42	0.48	0.46	0.43	0.39	0.41	0.13		
Charlottetown.				0.01	0.10	0.25	0.34	0.39	0.44	0.47	0.51	0.46	0.34	0.14		

	Victoria.	Nanaimo.	Agassiz	Kamloops.	Savona.	Calgary	Edmonton.	Medicine Hat.	Battleford.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Halleybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton	Charlottetown	
Mean proportion for month Constant sunshine being 1	0.27	0.23	0.15	0.27			0.40	0.49		0.31	0.36	0.33	0.18	0.27	0.19		0.17	0.19	0.23	0.23	0.23	0.21	0.21	0.36	0.37	
Difference from average.	+ 0.08	-	- 0.04	-						+ 0.06	+ 0.03	- 0.01	- 0.07	- 0.01	- 0.06		-	-	- 0.04	0.07	0.07	-	- 0.03	0.04	-	
Maximum daily amount.	0.80	0.76	0.63	0.93			0.90	0.87		0.74	0.80	0.81	0.67	0.84	0.70		0.75	0.90	0.91	0.85	0.79	0.82	0.91	0.92	0.95	
Date.	10	9	9	30			27	11		5	7	28	19	16	123		23	24	23	23	21	29	24	17	24	216
No. of days completely clouded	10	15	17	13			5	5		5	6	14	12	11	14		11	12	13	12	13	11	13	10	9	

Aurora recorded :

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Waitefield, IV.
2. Waitefield, IV ; Meota, III.
3. Cartwright, Georgetown, Waitefield, I ; Threehills Creek, IV ; Red Willow, Pakan, III ; Hillsdown, IV ; Gray Hill, IV ; Grenfell, II ; Meota, II ; Hillview, I ; St. Albans, II ; Bruce Mines, III ; Minnedosa, I ; Parry Sound, I.
4. Sutton West, Swift Current.
5. Waitefield, IV ; Kenora, IV ; Regina, IV.
6. Minnedosa, I.
7. Waitefield, IV ; Pakan, III ; Gray Hill, IV.
8. Waitefield IV ; Red Willow, Minnedosa, III.
9. Cartwright, Waitefield, I ; Threehills Creek, IV ; Red Willow, Pakan, III ; Hillsdown, III ; Gray Hill, III ; St. Albans, I ; Birnam, II ; Madoc, IV.
10. Sion, Waitefield, IV ; Pakan, III ; Meota, IV ; Birnam, IV ; Swift Current.
11. Waitefield, III ; Threehills Creek, III ; St. Albans, II ; Prince Albert, I.
12. Meota, IV ; Regina, IV.
16. Yarmouth, IV.
22. Regina, III.
23. Meota, IV.
26. Sion, Minnedosa, IV.
29. Sion, Hillsdown, IV.
30. Sion, Hillsdown, IV ; Minnedosa, IV.

Thunder recorded on :

2. Gray Hill.
18. Winter Harbour.

FORECASTS FOR NOVEMBER, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1299. These were divided as follows:—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	79	34	17	8	79.1
Saskatchewan	81	55	18	7	89.0
Manitoba	79	63	12	4	87.3
Lake Superior	106	76	25	5	83.5
Lower Lake Region	126	82	33	11	78.2
Georgian Bay.	126	83	30	13	77.8
Ottawa Valley.	120	86	20	5	83.7
Upper St. Lawrence	119	80	26	4	85.7
Lower St. Lawrence	116	82	22	12	80.2
Gulf.	116	78	25	13	78.0
Maritime Provinces, West	116	82	23	5	81.5
Maritime Provinces, East.	116	77	30	9	79.3
Total	1299	907	292	100	81.1

In order to obtain the percentage of verification of the productions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director

Meteorological Office, Toronto,
31st December, 1907.

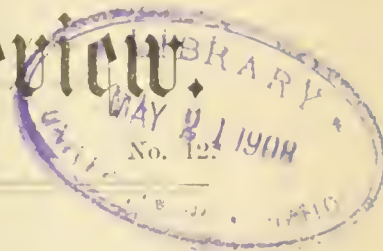
DEPARTMENT OF MARINE AND FISHERIES, CANADA.

METEOROLOGICAL SERVICE.

Monthly Weather Review.

VOL. XXXI.

DECEMBER, 1907.



INTRODUCTION.

In compiling the present Review the principal data made use of are the telegraphic reports of observations received at this office for the purpose of weather forecasting, and reports by mail from voluntary observers and storm signal agents. For the material used in tracing the paths of areas of high and low pressure in the United States, we are indebted to the Chief of the Weather Bureau, Washington, D.C.

REMARKS UPON THE WEATHER.

The weather in British Columbia was comparatively mild in most districts, but at Alberni and Rivers Inlet it was slightly colder than usual. Over the lower mainland there was much dull weather and rain was of frequent occurrence during the first, second and fourth weeks. High winds were also frequent in this portion of the province. On the upper mainland the chief wet periods were from the 4th to 10th, 15th, 16th, and 21st to 28th, much of the precipitation being snow. Throughout the month there was much dull weather over the upper mainland.

In the Western Provinces the weather was unusually mild and was more especially so during the first week when temperatures exceeding 50° were quite frequent in Alberta. After the 7th lower temperatures prevailed and from the 16th to 20th and 23rd to 31st temperatures below zero were recorded on many days. Somewhat dull weather was reported on or about the 8th and 13th to 19th when light falls of snow occurred; but with these exceptions the weather was exceedingly fine and the total precipitation was quite light. At the end of the month the ground was bare in Alberta, whilst in Saskatchewan it was covered with snow to a depth of one to six inches.

The weather in Manitoba was quite mild from the 2nd to 7th, 11th to 15th and 19th to 23rd, and the mean temperature for the month was considerably above the average. The intervening periods and the last week of the month were comparatively cold, temperatures below zero being occasionally recorded. Although the sky was overcast more frequently than usual, the precipitation, which occurred chiefly on or about the 2nd, 4th, 9th, 15th to 18th, 24th and 28th was generally quite light. The depth of snow on the ground on the last day of the month was from one to six inches.

In Ontario the weather, though cool on the 3rd, 4th, 5th and 13th at many places, was comparatively mild throughout the greater portion of the month, and the mean temperature was above the average. In most localities the weather was fair during the first week also from the 16th to 21st. Clouded skies with frequent falls of rain or snow were general about the 7th to 15th and 22nd to 31st; and at some places there was also precipitation on the 1st. Many of the falls recorded were snow, but much of it melted and on the 31st the ground was covered to a depth of one inch in south-western districts and fifteen inches in northern and north-western districts.

In the Province of Quebec the weather was characterised by high mean temperature, quite mild conditions being general during the second week, also from the 23rd to 29th, and moderately cold weather at most places on all other dates. In most districts clouded skies were exceedingly frequent, and in the eastern portion of the Province precipitation which was chiefly snow was recorded on most days between the 1st and 4th, 8th and 16th, 24th and 31st. At western stations the falls were much less frequent, the chief dates being 10th, 11th, 16th, 17th, 18th, 28th and 31st. The depth of snow on the 31st varied between five and eleven inches.

In New Brunswick the weather was mostly fine from the 3rd to 9th, 14th to 22nd and 25th to 28th. Precipitation occurred in most localities on or about the 2nd, 11th, 16th, 24th and 30th, the falls, which included much snow, being comparatively heavy. Somewhat low temperatures were recorded during the first week, also about the 16th, 20th, 23rd and 27th, but with these exceptions

the weather was quite mild and the mean temperature was considerably above the average. The covering of snow on the ground on the 31st was at most places quite light and in some districts the ground was bare.

The weather in Nova Scotia was quite mild throughout the greater portion of the month, temperatures exceeding 40° occurring occasionally and 50° being also exceeded at some places on or about the 11th, 14th, 25th, 29th and 31st. The precipitation which was heavy at most stations was recorded on or about the 2nd, 3rd, 5th, 12th, 16th, 17th, 24th, 27th, 29th and 31st, it being mostly rain. Clouded skies prevailed and high winds were frequent. During a southerly gale on the 23rd thunder and lightning was recorded at some places. Sleighing was possible during the first week, but soon after the 7th, the ground was bare and continued so to the end of the month.

In Prince Edward Island the weather was mostly cloudy and exceedingly mild there being little cold weather, excepting about the 3rd to 6th, although the night temperatures were occasionally low. The precipitation which was recorded chiefly on or about the 2nd, 12th, 15th, 16th, 24th, 26th, 29th and 31st, was heavy in the aggregate and included a large proportion of snow. On the 15th and for some days later there was good sleighing, but by the 23rd the ground was practically bare.—F. F. PAYNE.

BAROMETRIC PRESSURE.

The mean atmospheric pressure for December was below the normal throughout Canada. The average departure was -0.10 of an inch and the extreme -0.25 of an inch at Kamloops, B.C. The Western Provinces and British Columbia showed the greatest divergence from average.

HIGH AREAS.

Eight areas of high pressure were traced during the month, four first appearing in the West Pacific States, two in Northern Alberta, and two from the neighbourhood of the Yukon Territory. The areas were almost without exception unusually feeble and accompanied by very little cold weather, in striking contrast to the conditions which prevailed in December of the previous year, when a succession of exceptionally important high areas swept across the continent from the Yukon Territory, attended by extreme cold.

LOW AREAS.

Thirteen areas of low pressure were traced during the month. Eight first moved into Canada from the Pacific Ocean, far to the northward, five into the Pacific States far to the southward, and one Atlantic Ocean area passed a little to the southward of Nova Scotia. The pronounced northerly course of so many of the areas was very marked, and conformed to the conditions which have been in existence for several months. Four of the areas which travelled over the Yukon Territory afterwards passed very far to the northward over the continent, apparently crossing Hudson's Bay. The majority of the areas were of much importance being usually attended in their eastward advance over the Dominion by heavy precipitation, chiefly as rain, and also by frequent strong winds and gales.

WINDS.

In British Columbia, on Vancouver Island and over the mainland the direction was largely variable, favouring somewhat the easterly. There were six days with strong and ten with fresh breezes, and five gales.

In Alberta the south and west directions predominated, with five days with strong and ten with fresh breezes, and two gales.

In Saskatchewan the south and west directions were the most prevalent, with four days with strong and ten with fresh breezes, and six gales.

In Manitoba the direction was more or less variable, favouring slightly the south and west, with nine days with strong and eight with fresh breezes, and one gale.

In the Lake Region the south and west directions were paramount, with nine days with strong and nine with fresh breezes, and eight gales.

In the Ottawa and Upper St. Lawrence Valleys the westerly direction was much in evidence, with twelve days with strong and seven with fresh breezes, and four gales.

In the Lower St. Lawrence Valley and the Gulf the westerly direction usually prevailed, with nine days with strong and eight with fresh breezes, and six gales.

In the Maritime Provinces the north and west directions were the most general, with six days with strong and nine with fresh breezes and seven gales, the latter occurring on the 2nd, between the 5th and 6th, between the 10th and 11th, on the 15th, between the 23rd and 24th, the 27th, and between the 30th and 31st.

The display of storm signals was discontinued to the Lake Region after the 10th. Navigation by that time was also pretty well closed in the Lower St. Lawrence Valley and the Gulf, only remaining open at ports in the Maritime Provinces. The gales of the month were all warned, except the moderate storm of the 27th.

TEMPERATURE.

In British Columbia, over the northwestern and northern portion of the Province, the temperature was average or slightly below, elsewhere throughout the Dominion it was above the average and nearly everywhere to a marked extent. In the Western Provinces the positive departure ranged from 5 to 9 degrees; in Ontario from 2 to 7 degrees; in Quebec from 5 to 8 degrees, and in the Maritime Provinces from 3 to 8 degrees.

The Highest and Lowest temperatures in each Province during December, 1907, were :

British Columbia,	64° at River Inlet on 2nd,	— 23° at Chilcotin on 17th and on 31st at Golden.
Alberta,	66° at Lethbridge on 5th,	— 27° at Eckville on 31st.
Saskatchewan,	55° at Gatesgarth on 4th,	— 29° at Meota on 27th.
Manitoba,	46° at Morden on 5th,	— 31° at Dauphin on 27th.
Ontario,	58° at Stony Creek on 8th,	— 20° at Judge on 26th.
Quebec,	55° at Cape Chatte on 10th,	— 16° at Chicoutimi on 29th.
New Brunswick,	58° at Chatham on 11th,	— 6° at Sussex on 4th.
Nova Scotia,	58° at Sydney & Truro on 11th,	— 6° at Truro on 22nd,
P. E. Island,	54° at Charlottetown on 11th,	— 9° at Summerside on 21st.

PRECIPITATION.

In British Columbia, Cariboo reported an excess of precipitation equivalent to nearly 90 per cent, but elsewhere in the Province there was a general deficiency amounting at Victoria to 52 per cent. In the Western Provinces, in the southern portion of Saskatchewan, there was a positive departure of 200 per cent at Regina and 79 per cent at Swift Current, elsewhere the negative departure was very well marked; Winnipeg and Medicine Hat recorded deficiencies of 98 and 63 per cent respectively. In Ontario the distribution of precipitation was every variable, some localities experiencing much less than the average. The most noticeable extremes were positive departures of 98 per cent at Toronto and 46 per cent at Ottawa, and negative departures of 49 per cent at White River and 94 per cent at Port Arthur. In Quebec the average amount was exceeded in all localities, more so in the western than in the eastern portion; Montreal recorded 60 per cent above the usual quantity. In the Maritime Provinces, in the region of the Bay of Fundy and very locally, elsewhere, the precipitation was less than the average, but over the large remaining portions of the Provinces the average was exceeded. The noticeable departures were a deficiency of 39 per cent at St. John and 79 per cent at Chatham, and an excess of 25 per cent at Halifax and Charlottetown.

DEPTH OF SNOW ON GROUND.

At the close of the year there was a remarkable absence in the Dominion of any pronounced depth of snow on the ground, and in many localities there was none. Considering the Provinces separately, the conditions were:—British Columbia, none on the low lands and apparently little on the mountains; Alberta none; Saskatchewan and Manitoba 1 to 6 inches; Ontario from a trace to 15 inches; Ottawa recorded the 15 inches, whereas White River, north of Lake Superior gave only 4 inches; Quebec from 5 to 11 inches; the Maritime Provinces 1 to 3 inches in northern and none in southern localities.

BRIGHT SUNSHINE.

All parts of Canada had less sunshine than the average, the largest deficiencies occurring in Ontario and Manitoba. The largest aggregate records were obtained at Winnipeg, Lacombe, Alta., and Medicine Hat, being respectively 78, 82 and 85 hours. The smallest records were in British Columbia where Victoria, Nanaimo and Agassiz recorded respectively 27, 33 and 31 hours of sunshine.

BIBBEN COLLEGE

YUKON:—

PRESSURE, TEMPERATURE, WIND AND PRECIPITATION AT STATIONS IN THE DOMINION OF CANADA, DECEMBER, 1907.

a Barometer not reduced to Sea Level. * Stations not furnished with Registering Thermometers.

STATION.	Latitude N.	Longitude W.	Elevation above sea level, in feet.	PRESSURE.			TEMPERATURE.						DIRECTION OF WIND FROM										VELOCITY OF WIND.			PRECIPITATION			No. of days completely clouded.	No. of days with rain or snow.	No. of days with fog.									
				Mean reduced.	Highest.	Lowest.	Range.	Mean.	Difference from average.	Highest.	Date.	Lowest.	Date.	Mean daily range.	Mean temperature of dewpoint.	Mean relative humidity.	Mean amount of cloud.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	C.	Total number of observations.	Mean miles per hour.				Highest day's velocity.	Date and direction from.	Amount.	Difference from average.	In month.	In first half.	In second half.		
NOVA SCOTIA.																																								
Bridgetown	43 49 45	65 16	40	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Halifax	44 30 43	63 31	38	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Port Hastings	45 42 42	62 11	45	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Port Sydney	45 23 41	61 19	40	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Sable Island, E. Point	43 58 59	60 16	25	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Sable Island, N. Station	43 57 40	60 16	25	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Truro	44 59 44	64 18	90	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Windsor	45 15 41	61 20	80	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Whitehead	45 15 41	61 20	80	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Yarmouth	43 30 45	66 2	15	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
P. E. ISLAND.																																								
Charlottetown	46 11 43	10	38	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Hamilton	46 25 43	18	15	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Summerside	46 18 43	1	15	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
NEWFOUNDLAND.																																								
Amour Point	51 28 46	51	125	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Channell	47 37 59	9	30	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Cape Norman	51 38 45	52	125	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
Point Rich.	50 12 57	55	125	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
St. John's	47 31 52	52	125	29.40	30.46	28.46	1.54	32.9	+1.4	33.33	11	5.5	22	13.5			7	15	10	3	2	2	1	8	13	10	0	62				6.72	+1	10.1	23	15	16	0	2	
BERMUDA.																																								
Prospect	32 17 41	30	151	30.18	30.10	29.83	0.35	65.7	+1.0	16.76	1	31	51	0	7.10	3	7	2	0	3	13	7	4	8	10	10	7	62				5.48	+0.34	1.38	19	12	0	1	0	

PRECIPITATION AT STATIONS REPORTING RAIN, SNOW, WEATHER, &c.,
DURING DECEMBER, 1907.

STATION.	RAINFALL					SNOWFALL				REMARKS.
	Amount in inches	No. of Days, '01. or over	No. of Fair Days	Heaviest Fall in Month	Date	Amount in inches	No. of Days.	Heaviest Fall in Month	Date.	
BRITISH COLUMBIA—	in.			in.		in.		in.		
Alberni (Somas River).....	10.72	19	12	1.82	3	3.2	4	1.2	28	
Beaver Lake.....	7.23	18	13	1.87	12	1.0	2	0.5	12-31	
Coquitlam.....	10.52	11	24	1.97	20	2.0	1	2.0	31	
Denman Island.....	11.42	12	19	2.00	25	1.5	2	1.0	30	
Goldstream Lake.....	9.94	20	11	1.35	13	21.0	6	10.0	28	
Hartley Bay.....										
Hornby Island.....	9.38	23	8	1.92	4	*	—	—	—	
Naas Harbour.....	5.01	8	23	1.34	2	7.0	3	4.0	20	
Nanaimo.....	6.92	8	23	1.62	13	1.0	1	1.0	31	
Swanson Bay.....	21.98	19	12	2.61	3	*	4	*	—	
ALBERTA—										
Bardo.....						3.3	3	2.0	23	
Beaver Hills, W.....	0.01	1	24	0.01	5	8.8	6	3.5	23	
Bismark.....						7.9	5	3.5	26	
Bruederheim.....										
Bittern Lake.....	0.02	1	26	0.02	5	10.3	4	4.5	23	—25°.0 on 31st.
Coutts.....						0.5	1	0.5	8	
Clover Bar.....										
Conjuring Creek.....						7.5	5	3.0	15	
Dorelec.....						9.3	4	6.0	25	
Grassy Lake.....						1.0	2	0.5	8-14	
Heather Brae.....						6.8	7	2.3	26	—15°.0 on 31st.
Islay.....										
Innisfail.....										
Josephsburg.....										
Jumping Pound.....	0.34	2	25	0.31	15	—	—	—	—	
Kimball.....						2.0	1	2.0	8	
Lacombe.....						2.0	1	2.0	19	
Leavings.....										
Macleod.....										
Magrath.....						3.0	5	1.0	15	
Mayton.....										
Morinville.....						2.0	1	0.8	12	
Okotoks.....						6.5	4	2.5	8	—10°.0 on 31st.
Ponoka.....						7.5	4	5.0	27	
Sion.....						5.0	5	1.5	26	—13°.0 on 31st. Aurora on 4, 5, 10.
Stirling.....						1.0	1	4.0	8	
Saddle Lake.....						6.0	4	3.0	8	
Vermilion.....						12.0	9	4.5	24	
Wabamun.....										
SASKATCHEWAN—										
Arcola.....										
Elm How.....						11.0	4	6.5	24	
Hanley.....										
Insinger.....						10.6	4	6.0	26	
Last Mountain.....						6.0	1	6.0	27	
Regina.....						4.5	1	2.0	26	Ice 14 inches thick on 25th.
MANITOBA—										
Beaver.....										
Cartwright.....						2.3	4	1.0	24	
Gretna.....						3.5	2	2.0	16	
Norquay.....						1.8	3	0.8	26	
Rapid City.....						2.7	5	1.1	16	—20°.0 on 23rd.
Rosebank.....										
ONTARIO—										
Aurora.....	0.96	3	20	0.47	9	28.3	8	11.3	15	
Arden.....	2.08	6	20	0.53	10	23.0	7	10.0	15	
Croyden.....	0.22	4	25	0.70	27	29.0	3	12.0	11	
Deer Park.....	3.22	8	20	0.97	30	13.3	5	10.0	16	
Button.....	3.10	3	20	1.20	29	13.0	8	2.5	10	
Emsdale.....	0.67	3	17	0.41	10	27.8	12	6.0	2	
Ennismore.....	0.85	3	26	0.30	30	15.0	4	6.0	11	
Goderich.....	1.40	3	21	0.80	9	13.0	8	2.0	—	
Georgetown.....	1.52	7	14	0.55	30	31.9	13	7.5	23	
Huntsville.....	0.80	2	20	0.45	9	22.0	9	5.5	31	
Lansdowne.....	3.05	3	24	1.70	23	9.0	4	4.0	14	
MacCue.....	0.65	1	26	0.65	27	19.5	4	13.0	15	
Midland.....						34.3	8	7.0	14-29	
Montague.....	1.90	2	25	0.98	23	13.5	4	8.0	15	
Orangeville.....	0.65	1	17	0.65	9	39.7	13	15.0	15	
Princeton.....	3.11	3	24	1.87	30	16.0	4	11.0	15	
Sydenham.....	3.50	5	25	1.50	23	22.0	3	12.0	14	
Strathroy.....	4.43	7	17	1.51	23	27.0	9	7.0	10	
Watford.....	3.12	4	27	0.90	29	—	—	—	—	
Westport.....	0.70	2	25	0.35	9-25	18.4	4	7.0	11	
Wooler.....	1.79	5	23	.56	28	24.0	5	10.0	15	
Westminster.....	1.62	4	25	0.66	28	9.0	2	6.0	16	
Warton.....	0.85	3	17	0.31	23	24.5	11	3.0	1-18	
NEW BRUNSWICK—										
Point Escuminac.....	0.21	4	24	0.09	11	13.5	4	4.2	2	Fog 28th.

PROPORTION OF BRIGHT SUNSHINE REGISTERED IN EACH HOUR OF THE DAY DURING WHICH THE SUN WAS ABOVE THE HORIZON IN THE MONTH OF DECEMBER, 1907.

STATIONS.	HOURS ENDING													
	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.
Victoria				.02	.08	.10	.15	.16	.17	.14	.05			
Nanaimo..				.01	.12	.23	.23		.10	.15	.03			
Agassiz...				.05	.13	.18	.24	.23	.15	.03	.01			
Kamloops..				.02	.18	.21	.20	.31	.31	.05	.00			
Calgary..			.03	.10	.16	.41	.47	.5	.52	.42	.00			
Fort Vermilion..														
Lacombe...				.01	.28	.46	.52	.53	.44	.22	.20			
Medicine Hat..														
Edmonton..				.10	.31	.35	.30	.45	.30	.28	.01			
Battleford..														
Indian Head..				.01	.10	.27	.38	.40	.43	.21	.00			
Brandon..				.02	.12	.22	.36	.35	.30	.40	.28			
Winnipeg..				.05	.30	.40	.49	.46	.38	.33	.09			
Woodstock..				.10	.19	.23	.31	.27	.25	.15	.11			
Toronto...				.06	.10	.18	.21	.26	.25	.21	.00			
Lindsay..				.09	.12	.20	.19	.21	.19	.18	.12	.04		
Barrie..				.01	.06	.16	.16	.18	.15	.15	.04			
Gravenhurst...				.00	.01	.07	.10	.12	.12	.05	.00			
Haileybury...				.09	.16	.27	.27	.25	.22	.24	.15			
Kingston.....			.8	.09	.19	.22	.23	.25	.26	.26	.16	.01		
Ottawa .....				.08	.23	.28	.33	.28	.20	.13	.05			
Montreal .....				.01	.13	.20	.21	.19	.18	.13	.02			
Sherbrooke.. ..				.08	.15	.24	.28	.35	.26	.25	.13			
Quebec.. ..				.05	.15	.20	.28	.31	.26	.20	.00			
Fredericton...				.09	.17	.25	.29	.33	.34	.25	.16			
Charlottetown..			.01	.22	.28	.27	.34	.30	.30	.20	.15	.01		

	Victoria.	Nanaimo.	Agassiz.	Kamloops.	Calgary.	Fort Vermilion.	Lacombe.	Medicine Hat.	Edmonton.	Indian Head.	Brandon.	Winnipeg.	Woodstock.	Toronto.	Lindsay.	Barrie.	Gravenhurst.	Haileybury.	Kingston.	Ottawa.	Montreal.	Sherbrooke.	Quebec.	Fredericton.	Charlottetown.
Mean proportion for month <i>Constant sunshine being 1</i>	0.10	0.13	0.12	0.47			0.31	0.31	0.30	0.22	0.26	0.31	0.18	0.15	0.15	0.10	0.05	0.19	0.19	0.18	0.14	0.20	0.19	0.21	0.24
Difference from average.	-.05	—	0.03	—			—	—	—	-0.02	-0.08	-0.01	-0.02	-0.08	-0.06	-0.06	—	—	-0.06	-0.01	-0.13	—	—	-0.13	—
Maximum daily amount.	0.78	0.73	0.71	0.65			0.86	0.89	0.88	0.65	0.83	0.81	0.77	0.77	0.70	0.70	0.51	0.80	0.82	0.78	0.72	0.85	0.85	0.92	0.91
Date	15	7	15	17			30	10	18	4	18	19	20	1	12	22	6	¹² ₁₂	17	21	25	13	21	29	29
No. of days completely clouded	16	22	20	12			6	9	6	13	10	14	15	15	19	20	26	11	19	17	17	17	16	14	15

Aurora recorded :—

Where the class of aurora is noted by the observer, it is given, (I) being the brightest, (IV) the feeblest in brilliancy.

1. Insinger, III.
3. Meota, IV; Insinger, III.
4. Waitefield, III; Threehills Creek, III; Red Willow, Pakan, III; Hillsdown, IV; Estevan, Chaplin, IV; Saskatoon, III; Moose Jaw, St. Albans, II; Kenora, IV; Lake Talon, Cape Chatte, III; Sion, Insinger, III; Cartwright, IV.
5. Waitefield, III; Pakan, III; Hillsdown, IV; Alameda, II; Waseca, Sion.
6. Waitefield, IV; Threehills Creek, IV; Pakan, III; Waseca, Insinger, IV.
7. Waseca, Treherne, Oakbank, Cape Magdalene, Cape Chatte, II.
8. Waseca, Insinger, IV.
9. Waseca, Hillsview, IV.
10. Waitefield, IV; Chaplain, IV; St. Albans, IV.: Sion, Insinger, III.
11. Insinger, II; Cartwright, IV.
12. Waitefield, III; Pakan, II; Bruce Mines, IV.; Shawinigan Falls.
22. Waitefield, IV.
26. Meota, I.
27. Waitefield, II; Insinger, IV.
30. Threehills Creek, Eckville, Meota, IV.
31. Waitefield, IV; Chaplin, IV.

Thunder recorded on :

22. Brome.
23. Alameda.
24. Alameda, Percé.
25. Alameda.

FORECASTS FOR DECEMBER, 1907.

The forecasts issued by this office at 11 p.m. each night, are posted up at every telegraph station in Canada, and are for the 24 hours beginning at 8 a.m. the following day.

The number of predictions issued during the month was 1249. These were divided as follows:—

DISTRICT.	No. Issued.	VERIFIED.			
		No. Fully	No. Partly	No. Not	Per- centage.
Alberta	76	67	7	2	92.7
Saskatchewan	76	65	9	2	91.4
Manitoba	79	72	6	1	94.9
Lake Superior	101	72	21	8	81.7
Lower Lake Region	119	99	18	2	90.8
Georgian Bay	119	106	8	5	92.4
Ottawa Valley	110	93	15	2	91.4
Upper St. Lawrence	110	97	12	1	93.6
Lower St. Lawrence	113	87	17	9	84.5
Gulf	115	91	16	8	86.1
Maritime Provinces, West	115	81	29	8	81.7
Maritime Provinces, East	116	89	22	5	86.2
Total	1249	1019	177	53	88.7

In order to obtain the percentage of verification of the predictions, the number partly verified is divided by two and added to the number fully verified, and the result divided by the total number issued.

In ascertaining to what extent the predictions have been verified, the reports from the agents at all observing stations, as well as the telegraphic reports, are used.

R. F. STUPART,
Director

Meteorological Office, Toronto,
31st January, 1908.

119189 P
Author ... Canada. Meteorological Service Astron.
Title Monthly weather review 1907 Can.

DATE.

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